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PLANNING AREA ANALYSIS

Paradise-Denio Planning Area

U. S. Department of the Interior

Bureau of Land Management

Winnemucca District, Nevada

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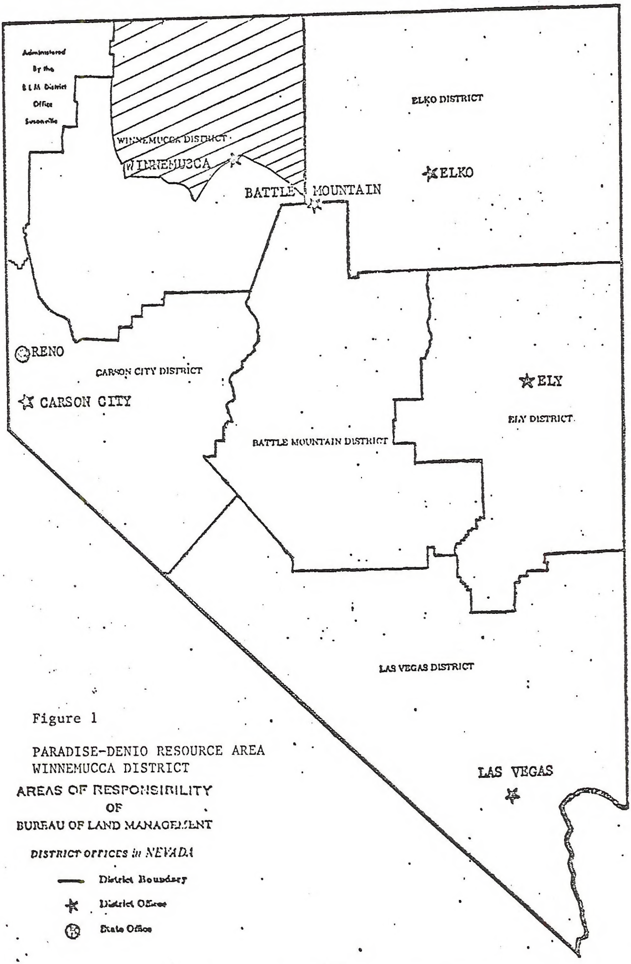
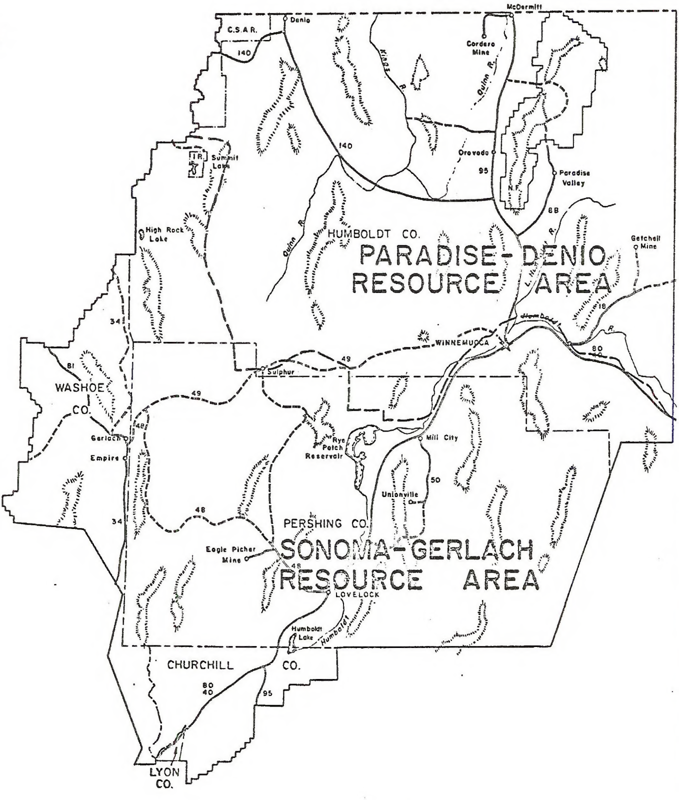


Figure 1

PARADISE-DENIO RESOURCE AREA
WINNEMUCCA DISTRICT
AREAS OF RESPONSIBILITY
OF
BUREAU OF LAND MANAGEMENT

DISTRICT OFFICES in NEVADA



WINNEMUCCA DISTRICT

PARADISE-DENIO RESOURCE AREA

Figure 2

INTRODUCTION

The Planning Area Analysis (PAA) is one of the steps in the BLM Land Use Planning System. It's purpose is to correlate social and economic information from the Socio-economic Profile 1/ with physical and biological data presented in the Unit Resource Analyses. The data is analyzed from a social and economic perspective to determine the significance of each resource activity and its importance at the local and regional levels. Information and projections presented in the PAA will be used in the development of activity objectives and recommendations in the Management Framework Plan (MFP). The PAA serves as a data base to judge the significance of social, economic, institutional, and environmental impacts of the various MFP proposals and as a basis for resolving conflicts among incompatible uses identified in MFP Step 2. The MFP Step 3, after public review and official approval, will serve as a master plan for land management in the resource area for the next few years.

The geographic area of the Paradise-Denio Planning Unit correlates roughly with the Humbodlt County boundaries. Data for several of the topics discussed in this report are available on a county basis only. Consequently much of the analysis will cover Humboldt County with differences handled descriptively in the text.

1/ The Socio-economic Profile (SEP) for the Winnemucca District was completed in 1976. Much of the material that appears in the PAA is an update of that found in the SEP.

SOCIAL VALUES ANALYSIS

The purpose of this section of the PAA is to analyze the values and attitudes of individuals and groups as they relate to public lands. Much of the data pertaining to social values was compiled for the Winnemucca District Socio-economic Profile in 1976 by Ruth Houghton, anthropologist from Reno, Nevada. Prevailing public attitudes were also assessed at that time by BLM personnel who reviewed the public participation sections of the last Winnemucca MFP, the newspaper clippings file and other Bureau documents which reflected publicly expressed attitudes ("Public Attitudes" and "Socio-cultural Values" sections, pp. 26-35).

Since 1976 new management policies have come into effect and new residents have come into the planning area. In order to determine if similar attitudes and values still prevail, further research was conducted for the preparation of this document. Newspaper articles and published reports were reviewed as well as the public participation record. Informal interviews with influential community representatives were conducted, as well, to obtain information pertaining to the public's concerns and needs as they relate to the public lands. Several other local residents who held no particular office or officiating position contributed their opinions also. A total of twenty-four persons were consulted.

For the most part, the public attitudes and social values identified in the SEP were reconfirmed. However, new policies and developments have created new concerns. Also, whereas formerly local government was dominated by long-time residents, in the last three years an increasing percentage of the local elected officials are newcomers.

Attitudes and values relating to public land use in general are discussed in the following section. Those pertaining to particular resources are discussed in the individual resource sections of the PAA.

Public Attitudes

The following is a discussion of what appear to be the dominant concerns of area residents regarding the use and management of public lands.

1. Lack of Responsiveness to the Needs of the Local Public

Generally, it was felt that the District Office has been making a concerted effort to gather public opinion on land use decisions. However, this was perceived to be a more or less wasted effort as the real decisions are thought to be made in Washington. While some persons commended local BLM personnel on their professionalism and cooperation, others charged them with "bureaucratic timidity". The latter set of individuals expressed the opinion that BLM employees are "too interested in climbing the ladder to the top to take a stand against ridiculous directives they don't believe in themselves."

Local residents feel that they should have more say in the decisions concerning the local area. In their view most of the major policies affecting their area are made by people in the east who are neither acquainted with the local area and problems nor concerned with the social and economic welfare of local people. The decisions are considered to be made on a political basis or in response to groups who have more time and money than local people to promote their causes.

It is felt that more authority should be delegated to the state and district levels of the BLM. People commented that frequently local personnel seemed sympathetic with their problems only to have the decision overturned by someone higher up.

Complaints were also made that the 60-day comment period on proposed actions or regulations is not long enough for the public to respond effectively on the issues. Also, it was recommended that more and wider publicity should be given to proposed actions and comment periods.

2. Environmentalists Have a Disproportionate Say in Land Use Decisions

The predominant opinion is that when the BLM makes land use decisions the environmental aspects of a situation are given more serious consideration than are the socio-economic effects which a proposed action might have on the local area. It is thought that there is a need for environmental protection but that the present onslaught of environmental regulations are stifling private enterprise. Some sort of economic base, it is felt, must be maintained.

There is quite a lot of concern about environmental laws threatening the stability of the national, as well as the local, economy. Correlations were drawn with the present energy crisis suggesting that we would be in the same situation with minerals and other resources in a few years as we are presently with oil. The feeling is that the lands are here to be used but that a few areas should be set aside for preservation and recreation. Environmental groups are considered to have more time and money to promote their causes. Also, the opinion is that frequently environmentalists have not even seen the areas they are promoting for protection.

3. Excessive Regulation

Most people seem to feel that there are simply too many controls, that they have multiplied incredibly in the past several years, and that they will continue to increase to the point where the regulations "throttle the industries they are supposed to help." It is not just the BLM regulations, but all the federal, state, and local regulations combined that make it difficult to accomplish anything until after time-consuming and expensive studies are completed.

4. State Control of Public Lands

Those interviewed indicated that the so-called "Sagebrush Rebellion" has been brought on by the environmental push, excessive federal regulations, and lack of responsiveness to the local public. It was generally felt that the state control of public lands would alleviate problems of excessive regulation and lack of responsiveness to local concerns. However, some doubts were expressed concerning the integrity of state officials, the state's ability to manage the land, and the possibility that public land would be sold off to private interests, thus limiting access to fishing, hunting, and other recreation areas. Although the majority of those interviewed did have reservations about state control of public lands, they felt that the general population did support the "Sagebrush Rebellion," although probably did not understand all its ramifications. Interviewees generally felt that if the BLM were given more authority at the state and district levels and BLM employees were less mobile, BLM management might be acceptable.

5. High Degree of Turnover Among BLM Personnel

As Ruth Houghton pointed out in the SEP, area residents place a high value on the length of time a person has resided in the area. Long-term residence signifies a commitment to the area and its people and a real concern for its problems. The short-term residence of most BLM personnel signifies the opposite to area residents. BLM employees are viewed as outsiders who are unfamiliar with the local area, unaquainted with its particular problems, and uncommitted to its welfare. It is believed that many of the field personnel are young, inexperienced, and trained in lusher environments than the arid lands of the Paradise-Denio Planning Area. Consequently, the local populace is skeptical of any advice these newcomers have to offer and indignant that these BLM employees are in a position of dictating to them the proper management of lands that they and their forefathers have worked for generations.

6. Rural Atmosphere

A high value was placed on the rural atmosphere of this area. For most people this is a major attraction, and many had moved here from the city because of it. They found city life fast-paced, confusing, and impersonal by comparison. Many people had moved here, or knew people who had moved here, leaving better jobs to live in a smaller, less densely populated, and friendlier rural area.

7. The BLM Spends Too Much Time Doing Studies and Not Enough Time Putting These Studies Into Action

It was felt that more time and money should be spent on utilizing the data already collected and taking positive action to enhance the public lands, rather than doing new studies. It was also felt that the public should get more feedback from the studies which have been done. Complaints were registered about reports being promised but never sent.

8. Public Relations

With few exceptions those persons interviewed stated that BLM personnel had been cooperative in their dealings. It was also indicated that the BLM seemed to be making more of an effort in recent months to keep the local public informed.

However, it was felt that public relations could be improved by publicizing more information on the why and the wherewithal of BLM policies. This need was made evident by the numerous misconceptions revealed during the course of interviews with local people. More public education efforts and publication of positive accomplishments of the BLM, rather than strictly those of a regulatory nature, might do much to enhance public relations.

Socio-cultural Groups

Socio-cultural groups are covered extensively in the SEP--length of residency, geographic location, and ethnic group being described as the main categories into which residents classify people. Mexicans are one ethnic group, however, which more information is available on at this time. The following discussion is relevant as the Mexican population would probably increase if more public land were utilized for agricultural purposes, and particularly for potato production.

Mexicans are relative newcomers to the planning area, but they constitute a substantial percentage of the population. The majority have come to the Winnemucca area since 1971, drawn by the need for laborers in the potato fields, packing, and processing plants.

Estimates for the number of Mexicans in Winnemucca run as low as 500 and as high as 3,000. Part of the difficulty in determining accurate population figures is that the actual number of Mexican residents fluctuates. Many are migrant workers who come only to work on the potato harvest. When the harvest is completed they move on to other agricultural areas in the United States or return to Mexico. Others stay on after the harvest finding work, if possible, in processing plants, restaurants, and casinos, or at other forms of manual labor. Existence is difficult as jobs are not always easily found and the type they are able to obtain is generally low-paying. They live fairly simply, however, and temporarily unemployed persons are generally aided by their friends. As yet, no burden of unemployed Mexicans is borne by the community.

A majority of the Mexican population are illegal aliens who have come to work in the United States because of poor economic conditions in their homeland. Naturalization is extremely difficult to achieve and most live in constant fear of the immigration officials, even though the visits of these officials have been infrequent in recent years.

At the onset, it was predominantly single males that came to Winnemucca. During the last three years, however, whole families have been migrating to this area. There are presently approximately 130 Mexican students enrolled in the Humboldt County School District. There are two bilingual classrooms, three full-time bilingual teachers, and three bilingual aids. Certain health problems tend to be associated with the undocumented aliens which increases the workload of the school nurse. The necessity of teaching the Mexican students English is the only other special problem created by their presence in the schools. If the Mexican population grew, more bilingual teachers and aids would have to be hired and more special programs set up. Bilingual programs are federally funded.

The community has demonstrated a concern in the problems associated with the increasing Mexican population. The Winnemucca Chamber of Commerce is presently sponsoring a study funded by the Nevada Humanities Committee to determine the effects of the undocumented alien population on the community. Residents perceive a variety of problems. The Mexicans' lack of knowledge of English creates a language barrier which inhibits communication and assimilation. Also differences in national laws and customs create problems. In Mexico there are few laws governing vehicle operation, maintenance, and insurance. Consequently, there are frequent violations of this nature by Mexicans. Other infractions of the law occur because of similar misunderstandings. For example, payment of medical bills is often neglected. This may be due in part to a predominance of free medical clinics in Mexico and in part to Mexicans being accustomed to the patron system whereby the employer takes care of the employee, including major medical bills. Few crimes of a serious nature are committed by Mexicans in this area.

It is a source of resentment to some members of the community that illegal immigrants pay no taxes and yet their children are educated at taxpayers' expense. Other problems involve heavy use of public parks and facilities and standards of cleanliness, and occasionally incidents of drunkeness and brawling. Temporary pressures are put on the rental housing at harvest time as well. Some sentiment has been expressed that since the Mexicans are living here, they should make more of an effort to assimilate as other ethnic groups have. The Mexicans have a tendency to congregate in groups which some residents find intimidating. Also there is concern that congregations of undocu-mented aliens in the downtown area intimidate tourists and cause loss of business to the casinos and local businesses. There have been some complaints by parents about their high school students not being able to find summer jobs as easily as they used to. According to employers though, this is only because they find the Mexicans to be more dependable workers.

The community of Winnemucca has established a soccer field for the Mexicans and the library is in the process of expanding it's bilingual collection. Also, the city would like to establish a clearinghouse for the undocumented aliens where they could be given advice on housing, employment, as well as briefing on observance of local, state, and national ordinances.

The community does stand to benefit from the presence of the Mexicans here in several ways. The undocumented aliens do provide a cheap and available source of labor, particularly for the potato industry. Money earned by them is generally spent within the community. Also, Mexico is a country with a rich cultural heritage. If interaction between the community and the Mexicans were encouraged, shared ideas on food, dance, clothing, crafts, customs, and ways of life could be beneficial to the community. (PAA interviews, August 1979; Humboldt Sun article, May 29, 1979; 1976, Winnemucca District SEP, p. 31.)

PAA Table 1
SIGNIFICANCE OF SOCIAL WELL BEING

Difference Well-being Factors	State(a)	Humboldt County(b)	Percent (See note below)
1) Population Change (Average Annual Rate of Change)			
1960-1970	5.5%	1.17%	(b-a)/a=-79
1970-1977	3.8%	2.5%	(b-a)/a=-34
2) Per Capita Income			
1977	7,980	6,168	(b-a)/a=-23
3) Migration Pattern as an Indicator of Employment Opportunity			
1960-1970	50.4%	-0.1%	(b-a)/a=-100
1970-1976	19%	8.4%	(b-a)/a=-56
4) Unemployment Rate			
First Quarter 1979	5.2%	4.4%	(b-a)/a=-15
5) Median Effective Buying Income			
1978	$18,017	$16,716	(b-a)/a=-7.2
6) Families Below Poverty Level (%)			
1970	6.9%	7.5%	(b-a)/a=9
7) Housing Units Lacking Some Plumbing Facilities (%)	(Rural Nevada)		
1970	7.2%	10.6%	(b-a)/a=47
8) Housing Unit % Overcrowding (more than 1.01 persons per room)			
1970	9.7%	10%	(b-a)/a=3
9) Infant Deaths Per 1000 Live Births			
1975	16.6%	25%	(b-a)/a=51

NOTE: If county social well-being indicator deviates from that of the state by as much as 20% (either positive or negative), the difference is considered significant.

RESOURCE ANALYSIS

This section is subheaded under the resource activities: Lands, Minerals, Forest Products, Range, Wild Horses & Burros, Water Resources, Wildlife, and Recreation. The base information is used in this section to determine the social and economic significance and future demand for each resource.

LANDS

A. Quantifiable Land Use Classes

The Paradise-Denio Planning Unit contains 5,127,054.3 acres in Humboldt, Elko, and Pershing Counties (see PAA Table 2). Ninety-two percent of this acreage (4,739,704.4 acres) lies within Humboldt County, therefore the majority of the analysis in the PAA will apply to Humboldt County.

PAA Table 2
Paradise-Denio Planning Unit Land Acreage

County	BLM Land	Other Public Land	Private, State, etc. Lands	Total	BLM Percent of Total
Humboldt	3,531,198	406,064.2	802,442.2	4,739,704.4	74.5
Elko	274,190	0.0	4,937.9	279,127.9	98.0
Pershing	70,243	0.0	37,979.0	108,222.0	65.0
TOTAL	3,875,631	406,064.2	845,358.9	5,127,064.3	75.6

Urban-Suburban

The majority of urban-suburban land within Humboldt County is concentrated in and around the City of Winnemucca, the balance is distributed among the small communities of McDermitt, Denio, Orovada, Paradise, and Golconda. Only 7,680 acrs (less than one percent of the planning area) have been identifeid as meeting the urban-suburban land class qualifications.

Agriculture

Humboldt County tax assessment records identify 164,454 acres of irrigated cropland within the county.

Use	Acres
Cultivated	98,718
Wild hay	47,984
Pasture	17,752
	164,454

An additional 646,895 acres of private land is devoted to grazing.

Agricultural land within the planning area, computed on a percentage basis (the Paradise-Denio planning area accounts for 76% of Humboldt County), amounts to 125,324.5 acres. Major agricultural districts within the planning area lie in the Kings River Valley, Quinn River Valley, Paradise Valley, and along the Humboldt River.

Utility Systems

There are 521.3 miles of power and communication line corridors and 57.2 miles of a natural gas pipeline corridor passing through BLM land within the planning area. BLM land accounts for 75.6% of total acreage within the planning area.

Other Land Uses

Nine communication sites totalling 2.07 acres are currently under lease form the Bureau of Land Management. Six sanitary landfills encompassing 55.9 acres have ben deeded to Humboldt County to provide county residents with trash disposal areas in order that indiscriminate littering of public lands can be prevented. The 297.8 additional acres are used for recreation and public purposes.

Chimney Creek Reservoir	220 acres
Denio Rodeo Park facility	62.8 acres
School (Kings River Valley)	5.0 acres
Churches (McDermitt area)	10.0 acres
	297.8 acres

B. Nonquantifiable Land Uses

The lands within the Paradise-Denio Planning Units are presently classified under the Classification and Multiple Use Act. The Bureau of Land Management also cooperated with the State of Nevada in the closing of federal lands to the filing of petitions for classification, and to applications for entry, under the Homestead, Desert Land, and Pittman Laws (43 USC Chapters 7, 9, and 10) for public lands in Nevada. The cooperative agreement was in effect from 1964 to 1978.

The Organic Act (Public Law 94-579), also known as the Federal Land Policy and Management Act of 1976, repealed certain statutes and parts of statutes listed under the homestead laws, laws related to disposal, and various other settlement laws. This Act was promulgated for the retention of federal lands unless, as a result of land use planning as provided for in the Act, it is determined that disposal of a particular parcel will serve the national interest.

The Desert Land Entry laws and statutes were not repealed by the Organic Act.

C. Regional Trends

Population in Humboldt County has increased gradually since the 1920s. Population increased from 6,375 in 1970 to 7,947 in 1978, an average annual growth rate of 3.08%. Migration into the county represented 88.4% of the population growth between 1970 and 1975. This trend reflects the expansion of the economic sectors and the accompanying growth in employment. Total employment increased 24% from 1973 to 1978 while nonagricultural employment experienced an even greater increase (27%) for the same period. The City of Winnemucca and its outlying districts have experienced the largest actual increase of any area within the county. The population of 4,345 in 1975 represented 68% of the total county population. [1]

The construction of two 250-megawatt, coal-fired steam generator units at North Valmy, Nevada, has a significant impact on the planning area. Employment requirements are 450 temporary persons during the peak construction phase and 60 permanent employees for the operational phase. Construction of the power plant and associated power transmission lines required transfer to title of 960 acres of public land to the Sierra Pacific Power Co., and the issuance of a grant of right-of-way for construction of a 345 KV transmission line from Valmy to Austin. Depending on final alignment, this line will cross 73 to 85 miles of public land, only a very short section of which falls within the Paradise-Denio planning area. Significant temporary demand and a lesser degree of permanent demand for facilities and services within the planning area can be expected from the construction and operation of the power plant and transmission lines.

D. Significance

PAA Table 3 illustrates the significance of different land use classes in terms of the employment and income generated by the economic sectors or industries within the respective classes. Approximately 78.5% of Humboldt County employment and 75.1% of income is derived from industries falling within the urban-suburban land use classifications. On a statewide basis urban-suburban based industries are responsible for 91.0% and 89.3% of employment and income, respectively. Within the urban and suburban land use category the wholesale and retail trade sector is the major source of employment and income for Humbodlt County, accounting for 25.8% of employment and 23.6% of income.

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[1] Humboldt County Regional Planning Commission, General Plan Background Data for Humboldt County, 1976.

The significance of this sector to the Humboldt County economy illustrates the importance of the City of Winnemucca as a regional trade center for the outlying communities and agricultural areas. In comparison, the trade sector for Nevada accounts for 19.5% of employment, and 15.1% of income, while the service sector, on a statewide basis, accounts for 40.7% and 37.6% of employment and income. Within Humboldt County the service sector is the second largest source of employment (21.5%) and third largest source of income (17.5%).

The third largest sector in terms of employment (19.2%) and second largest in terms of income (20.9%) is the federal, state, and local governments. Federal government is responsible for 4.9% of income, slightly below the state average of 6.6%, while state and local governments account for 16.0% of income, above the state average of 11.1%.

The remaining sectors within the urban and suburban lands category--construction, manufacturing, finance, insurance, and real estate--account for 12.0% of employment and 13.1% of income.

The agricultural lands category follows the urban and suburban class in importance. Agriculture has historically been a significant and stable element in the Humboldt County economy. The employment and income figure of 12.3% and 12.4%, respectively, reflect agriculture's continuing importance in the county and make it the fourth ranked sector in both categories. The significance of agriculture to the county economy is substantially greater than to the state as a whole where it accounts for only 1.6% of employment and 0.8% of income.

The utilities' land use class ranks third in importance with the transportation, communications, and public utilities sector within this class accounting for 6.1% of employment and 11.7% of income. The construction of the Valmy power plant will increase the number of permanent employees by 60 people. This represents a 30% increase in employment in the public utilities sector which will result in a small increase in the importance of this sector to the Humboldt County economy.

The mining sector ranks next to last in importance in terms of employment (3.1%) and BLM estimates place it last in terms of income (1.0%). The mining industry, although historically of significant importance to the local economy, has experienced a long downward trend in employment and income.

PAA Table 2
Land Use Related Employment and Income in Humboldt County 1977

Land Use and Associated Industries or Sector	Annual Employment		Annual Income	
	Persons[1]	% of Total	$1,000[2]	% of Total
Urban and Suburban Lands (7,680 acres)				
Construction	130	4.0	2,012	5.4
Manufacturing	190	5.8	1,850	5.0
Trade	840	25.8	8,765	23.6
Fin., Ins., & R.E.	70	2.2	994	2.7
Services	700	21.5	6,514	17.5
Government	620	19.2	7,788	20.9
SUBTOTAL	2,550	78.5	$27,923	75.1
Agricultural Lands (164,454 acres)				
Agriculture	400	12.3	4,629	12.4
Utility (578.5 miles)				
Trans., Comm., & P.U.	200	6.1	4,366	11.7
Mineral				
Mining	100	3.1	267 [3]	1.0
TOTAL	3,250	100.0	$37,185	100.2

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[1] Nevada Employment Security Department, Balance of State Area Labor Review, Fall 1978.

[2] Regional Economics Information System, Bureau of Economic Analysis.

[3] BLM estimate based on historical data; actual figures withheld to avoid disclosure of confidential data.

E. Additional Analysis

The overall population density of Humboldt County is .73 persons per square mile (1975 data) which is less than the Nevada average of 5.3 persons per square mile and much less than the United States average of 60 persons per square mile. The estimated population of 6,063 [1] (1975) on urban and suburban lands within Humboldt County results in an average density of 505.25 persons per square mile of .8 persons per acre. The remaining 1,037 people would then be distributed throughout the county at a density of .1 person per square mile. The draft General Plan Background Data for Humboldt County states that average density of developed residential land in the City of Winnemucca is 19 persons per acre, indicating that average densities of the urban-suburban land outside the Winnemucca area is probably considerably lower than the 505.25 persons per square mile (.8 persons per acre).

The Agricultural Service Center, Cooperative Extension Service of the University of Nevada, has estimated that in 1977 there were 242 farms with 227 operators in Humboldt County. At an average of 2.93 [2] persons per household with a total of 164,454 acres of irrigated cropland in the county population density of agricultural land would amount to 2.6 persons per square mile.

The population of Humboldt County for 1977 amounted to 7,573 people, 1.2% of the state total. Total employment for the county was 3,840 persons. The population-employment ratio derived from these figures is 1.97 persons per employed individual.

F. Local Demand Analysis

The draft General Plan Background Data for Humboldt County, 1976, indicates that residentially zoned land within the City of Winnemucca accounts for 1,070 acres; only 20% (213 acres), however, is currently developed for residential use. The 764 acres of vacant residentially zoned land remains to accommodate population growth within the city. At current population densities of 19 persons per acre, this land could absorb an additional 24,500 people without requiring additional land. The projected population by the year 2000 for Humboldt County is 14,530 people [3], an increase of 7,530 people over the 1975 population. The 7,680 acres of land currently classed as urban and suburban within the county can easily accommodate the population increase at a much lower density rate than that of Winnemucca. The demand for public land to facilitate growth of the urban and suburban population is expected to be negligible. Based on past growth trends, the populations of the small communities in the county are not expected to experience a substantial population growth over the next 20 years. The City of Winnemucca with greater than 50% of the Humboldt County population has substantial areas of undeveloped private land both inside the city limits and in close proximity. The 1976 draft General Plan Background Data for Humboldt County did indicate an interest in acquiring public land in close proximity to the city for future recreation and other public purposes.

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[1] BLM estimate.

[2] U.S. Bureau of Census, Census of Population-Nevada: 1950-1970 and Statistical Abstract of the United States.

[3] Nevada State Planning Coordinators Office

In general, buffer zones of undeveloped private land lie between the Humboldt County communities and the surrounding public lands. It is these private lands that will probably be developed before additional demand for disposal of public lands occurs.

Public Purposes

Demand for public land to be used for public purposes has been identified in the 1976 draft General Plan Background Data for Humboldt County which states, "that the city (Winnemucca) hopes to acquire public land in the future as population increases in order to maintain the current recreation land to population ratio". The town of Orovada has also indicated a desire to acquire public land to install a stabilization pond for their sewage system.

Agricultural Lands

Irrigated cropland currently accounts for 164,454 acres of private land. An additional 646,895 acres of private land is devoted to grazing. The reopening of public land to Desert Land Entry applications has resulted in numerous applications but only one application in Humboldt County is currently being considered for acceptance. The major impediment towards the development of additional agricultural land in Humboldt County is the availability of water. Water rights are allocated by the Water Resources Division of the Nevada Department of Conservation. The Water Resources Division will grant water rights until the safe yield (the quantity of water that can be withdrawn on an annual basis without a decline in the water table elevation) of the aquifer is reached. This division is currently conducting studies to quantify water resources within the state, and future development of agricultural land will depend on the results of these studies.

G. Lands - Public Attitudes and Social Values

The local citizenry of Humboldt County, municipal governments, and planning boards have identified the need to retain certain public lands in federal control for community needs, whenever they can be identified. Most towns and communities of the BLM district are not considered in a land-locked situation and, therefore do not require immediate attention for land disposal efforts.

Utility companies recommend the use of public lands for rights-of-way for utility services. They also recommend fewer restrictions, stipulations on the use of the utility corridors.

Northern Nevada residents exhibit appreciation for the solitude and general rural atmosphere of the public lands and the State of Nevada in general. Residents of Nevada defend their right to use, develop and appropriate public lands for their own use. This is usually seen in all aspects of Nevada economy.

Generally speaking, the residents of Nevada and governmental constituents would prefer the public lands, currently under administration of the Bureau of Land Management, to be under the control of the Division of State Lands, State of Nevada. Federal regulations and control of the public lands by the BLM has been a main issue with Nevada residents. At public meetings, the issues become highly emotional.

Resource users would prefer unrestrained, unlimited use of the resource as was generally practiced in the past.

Any move by the Bureau of Land Management to dispose of public lands is widely accepted with little or no opposition.

Presently a tract of BLM land lays between land belonging to the McDermitt Indian Reservation and private property owned by McDermitt residents. Two or three years ago this piece of public land was included among parcels of land which the Indian Reservation requested Senator Cannon to convert to Reservation ownership. The proposal was rejected at that time due to objections from the citizens of McDermitt. The town of McDermitt desires that this land remain public as it acts as a buffer zone. It is possible that this land might one day be necessary to accommodate growth and expansion of residential or commercial sections of McDermitt. Similarly, the town would prefer that any other public land adjoining McDermitt continue to be used solely for grazing as it too offers a safety valve for future growth.

Presently there is a large quantity of private land available for development. However, if McDermitt experiences a large population increase in the future it is conceivable that public land will be needed for development of community facilities. It is urged that this potential need be given consideration in future BLM planning efforts to avoid problems such as the town is facing now where a facility built by the Vale district BLM must be either moved or built around to allow expansion of the McDermitt School. (Interview with Victor Botts, Community Board Chairman and McDermitt Mine Manager, August 8, 1979.)

The Mayor of Winnemcuca registered a complaint concerning the length of time involved with processing the Airport Land Exchange. He bewailed the fact that the President must sign the agreement before it can take effect and emphasized that two years have already passed since the document was first submitted for approval.

Farmers and ranchers hold the opinion that agriculture and livestock should continue to be the dominant land use of northern Nevada. Agriculturalists also think that the federal government should release more land to private enterprise for agricultural development.

Many residents believe that Mexican population presents a number of problems for the community and that these difficulties would be multiplied by the increased number of undocumented aliens which would probably be associated with more land being used for the purpose of growing potatoes. (The relationship of the Mexican population to the community is discussed in more detail in the "Social Values Analysis" portion of the introduction.)

MINERALS .

A. Locatable Minerals

BLM Policy and Responsibility

The BLM takes no active role in encouraging exploration for or development of locatable mineral resources. The BLM is charged with the responsibility for determinng the validity of mining claims, for approving mineral patents, and for prosecuting cases of suspected mineral trespass when and where such cases and actions involve public lands under its jurisdiction.

It is also the responsibility of the BLM to insure that the closing of public lands to all forms of mineral entry occurs only when it has been determined that the best use of the land is for some purpose other than the exploitation of mineral resources.

Resource Evaluation and Market Analysis

Long-range mineral resource evaluation and market demand estimates are at best speculative. Both mineral resource evaluation and development are directly dependent upon market demands that may be regional, national, and/or worldwide in nature. Crude estimates of mining and its socio-economic impacts on Humboldt County are shown in PAA Table 5.

Adequate reserve estimates exist for only six areas within the Paradise-Denio Resource Area: (1) the McDermitt mercury mine; (2) the Getchell gold-tungsten properties in the Osgood Mountains; (3) the iron ore deposits within the Jackson Mountains; (4) tungsten deposits in the Eugene Mountains; (5) gold deposits near Golconda; and, to a lesser degree, (6) uranium deposits in the Montana Mountains. Other estimates of mineral resources within the resource area, their amount and/or location, are speculative. The distribution and classification of mineral resources within the resource area is identified in Step 3 of the appropriate URA.

The McDermitt Mine is the only major mercury mine in the United States. The mine annually produces a third of reported U.S. consumption of mercury. Operators of the McDermitt Mine (mercury) have planned for a 20-year mining and milling operation. The ore body is estimated to contain three million tons of ore that averages eleven pounds of mercury per ton. The mill is designed to handle ore at a rate of 700 tons per day. The mining and milling operations at present employ about 60 workers. This employment figure is expected to remain stable throughout the operational life span of the mine. The annual payroll averages $600,000+.

The Getchell Mine properties contain significant amounts of gold and tungsten. Gold reserves are estimated at one to two million tons of ore with an average grade of 0.5 oz. gold per ton. The gold is strongly coupled with arsenic. Technical limitations preclude development at this time, but environmentally acceptable methods of gold-arsenic separation are put at approximately two million tons of ore with an average grade of 0.4%. Extraction of tungsten ore ended in 1957, but it is anticipated that mining will resume within the next four years.

Tungsten deposits within the Eugene Mountains are receiving intense evaluation at this time. Reserves are tentatively reported at 500,000 to 800,000 units (20 lbs/unit) of 0.5% tungsten ore. Anticipated employment, if mining and milling is resumed, is set at 200 persons. Utah International is the main corporate body in this area.

The Jackson Mountains contain significant reserves of iron ore, principally magnetite and hemitite. Reserve investigations suggest three to four million tons of iron ore at a grade of 62% iron. The nature of the iron ore is such that its main market would be for specialty uses (reactor core wall fillings, etc.). Preliminary estimates for production are for a volume of 100,000 to 150,000 tons of ore per year, employing a full-time work force of 15-20 people.

Gold ore deposits near Golconda have recently been evaluated, with favorable results. Ore reserves have been estimated at 1.4 million tons of .18 oz. gold/ton with an additonal 3 million tons of .08 oz./ton which may prove to be mineable, depending on market conditions.

Operation is expected to begin in 1981 at an annual production rate of 300,000 tons of ore. The mine will be an open-pit type mine which will be located on public and private land, with a majority of the pit on public land (no percentage estimates are available).

The operational phase is expected to continue for a minimum of five years and a maximum of 10 years. Employment is expected to involve approximately 50-60 employees, generally from the Winnemucca and Battle Mountain labor pools, with an annual payroll estimated at $1.2 million.

The remainder of the district contains identified and inferred submarginal deposits of various metallic and nonmetallic minerals. Specific commodities and locations are identified on the Mineral Overlay for URA Step 3 and MFP Step 1 for both the Denio and Paradise Planning Units. Knowledge of reliable reserve estimates for these commodities and location is almost totally lacking. Some of the deposits of gold, silver, lead, mercury, and uranium may prove economically valuable. However, it is nearly impossible to judge the impact that extraction of these and other mineral commodities would have on the local economy and work force. Judging by the size of past and similar operations in the case of small mineral bodies, local social and economic impacts would be small.

Segregated Form Mineral Entry

Some 3,100 acres of public land have been segregated from mineral entry in and about the Blue Lakes area (T. 45 N., R. 30 E., and T. 46 N., R. 30 E.). A mineral investigation was conducted prior to segregation, it revealed that segregation would have little or no impact upon the development of mineral resource of the Denio Planning Unit.

Employment and Population Dependence on Public Land

Current (1977) statistics indicate that approximately 72 workers (1.9% of employment in Humboldt County), are employed in some aspect of mining and milling of locatable minerals. Employment and income multipliers1/ have been derived for sectors of the Humboldt and Lander County economies by investigators at the University of Nevada-Reno2/. An employment multiplier of 1.4 applies to the metals mining sector and an employment multiplier of 2.03 applies to the nonmetal mining sector. Of the 72 workers in the locatable minerals category, 59 are employed in the metals sector and 13 in the nonmetals sector. Use of the multipliers indicates that employment dependence on the extraction of locatable minerals is 110 persons (2.9% of Humboldt County employment).

1/ Multipliers are indicators of the impact of a specific sector of an economy upon a region's economy as a whole. An output multiplier of 1.4, for example, indicates that if final demand for goods and services of a particular sector increases by one dollar, then the total increase in output for the economy as a whole would be $1.40. Employment multipliers indicate how many units of labor are generated in any economy by an increase in final demand in a particular sector of the economy that is sufficient to generate an additional unit of labor.

2/ Fillo, Frank D., Rodtke, Hans D., Lewis, Eugene P., The Economy of Humboldt and Lander Counties: A Working Model for Evaluating Economic Change. 1977.

The population employment ratio of 1.97 further indicates that a total of 217 persons within the county are dependent on the locatable minerals sector for their livelihood.

Employment figures do not differentiate between private and public land. Therefore, it is difficult to gauge what percentage of employment will be derived from future mineral extraction on public lands. At present a large percentage of the mining and milling of locatable minerals occurs on private lands. The degree to which these activities will be diverted to public lands in the future is unknown. However, it can be assumed that by the year 2000 mineral commodities, currently extracted from private lands, will be greatly depleted. As a consequence, similar resources, some already known and others yet to be discovered on public lands, will play an even more important role in terms of employment.

B. Saleable Commodities

BLM Policy and Responsibility

The Bureau has complete control over disposition of saleable mineral materials to individuals, companies or government agencies. Furthermore, the Bureau can and does control the methods of material site access and location, and stipulates the method and manner of site rehabilitation upon completion of material removal.

The Bureau has the responsibility to provide for purchase materials that will serve the public good. The demand for sand and gravel is present and continuing. The Bureau should designate and develop community sand and gravel pits. The extraction of other saleable commodities, such as stone, semi-precious gems and stones (where not a locatable resource), should be allowed within the framework of good land management principles.

Resource Evaluation and Market Analyses

Sand and gravel are high-bulk low-value mineral commodities. transportation costs can add significantly to overall costs if the product is imported a substantial distance, consequently local sources are important to the county's construction industry. The demand for sand and gravel is related to population growth. A 54% growth in population is projected for Humboldt County by 1990. This growth is expected to sustain an active local construction industry and consequently an active demand for sand and gravel. The amount and location of existing sand and gravel resources on public lands is difficult to estimate. An aggregate exploratory program is a needed facet of the BLM minerals program which, as yet, has received little attention.

In 1977, 132,000 tons of sand and gravel were produced in the county. This represents an average of 17 tons per person. At this rate, with a projected county population of 11,680 by 1990, approximately 200,000 tons of sand and gravel would be produced by 1990.

Employment and Population Dependence on Public Lands

At present, in Humboldt County, approximately 37 persons are employed in some phase of aggregate extraction and processing (Directory of Active Nevada Mine Operations by Counties, 1978) (Table 2). Using the multiplier of 2.03 developed by the University of Nevada, employment dependence on this industry is 75 persons (2% of employment). At current production rates approximately 50 persons would be employed in this industry by 1990.

The value of extracted aggregate was $273,000 in 1979 (figured at $150/ton). Using the output multiplier for the nonmetal industry derived for the Humboldt-Lander economies, the total output generated by the $273,000 value of output in the sand and gravel industry if $404,000.

C. Leasable Minerals (Oil, Gas, Geothermal, etc.)

BLM Policy and Responsibility

The United States, through the Mining and Minerals Policy Act of 1970, is currently involved in long-term policy that is geared toward insuring that the national economy continues to have abundant supplies of minerals at reasonable cost, within the confines of environmental protection, and at acceptable levels of national security. In carrying out this policy, it is the BLM's responsibility to make public lands available for mineral leasing. In addition to offering lands for mineral leasing, the BLM is responsible for the expeditious processing of prospecting permit applications, lease and rights-of-way applications, and plans of operation. It is also the BLM's responsibility to ensure that the closing of public lands to all forms of mineral entry occurs only when it has been determined that the best use of the land is for some purpose other than the exploitation of mineral resources. Even then, such a closure should be made when the negative impacts of exploration and mining activities cannot be adequately mitigated.

Resource Evaluation and Estimates

Oil & Gas - Sodium, Potassium

Much of the resource area is classified by the U.S. Geological Survey as prospectively valuable for oil and gas; however, no oil and gas production is anticipated. There are four oil and gas leases in the resource area but no production has ever been recorded. No known geological structures capable of producing oil or gas occur in the area.

The Geological Survey has also classified many of the valleys in the resource area as prospectively valuable for sodium and potassium. However, there are no sodium or potassium leases in the area and no production has even been recorded. See PAA Table 6 for estimates of future production.

Geothermal

Geothermal resources have not been developed in the resource area. However, the western half of the Denio Planning Unit, the McDermitt area, and most of Paradise and Pumpernickel Valleys are classified as prospectively valuable for geothermal resources. Two Known Geothermal Resource Area (KGRAs) exist in the resource area: Baltazor KGRA and Pinto KGRA.

Quantitative data is lacking on geothermal energy in northern Nevada as it is in most of the western states. Some studies have been made for hot spring areas in the western United States (White 1975). Included in these studies are crude estimates of the electrical generating potential of the Pinto and Baltazor KGRAs. These estimates are based on many assumptions, one being that 25% of the thermal energy contained in these areas is recoverable as electrical energy (see PAA Table 6).

PAA Table 4 contains the dollar values based on present electrical rates in the Winnemucca area (September 1979) and the crude estimates of electrical generating potential, made by White, for the Pinto and Baltazor KRGAs. The electrical generating potentials are rated for 30-year and 100-year reservoir lives.

The use of geothermal energy for nonelectric applications may become important in the resource area. Geothermal energy can be used for space heating, food processing, green houses, industrial utilization, crop drying, etc. There are homes in Reno presently utilizing geothermal energy for heating.

Development of geothermal resources for electrical generation wil affect local communities through the provision of additional services. Exploration of a potential geothermal field would consist of about 40 people directly invovled in drilling, with 10-20 additional service people intermittently involved over a 1-2 year period (Brady Technical Report 1974).

Construction of a 55 MW power plant would take 2-3 years. Drill crews for one or two rigs would number 20-40, and 20-30 additional people would be involved in plant construction. All of the above personnel would be temporary.

Once the field is operating, about five permanent employees are needed for field production plus five more for each new power plant. One drilling rig would be needed full time, adding 20 more permanent employees to the area.

A 55 MW power plant is generally considered the minimum size of geothermal plant which meets economic efficiency criteria. A power plant of this size has the capacity to supply a community of approximately 55,000 people. The projected population of Humboldt County by the year 2000 is only 14,630, consequently power generated from a geothermal plant would provide surplus power that could be exported out of the region.

Sierra Pacific Power and a consortium of several other northwest utility companies are presently studying the feasibility of constructing a 20-55 megawatt, pilot, electrical generating plant in western Nevada using geothermal steam. One of the five proposed sites is located in the Brady Hot Spring area, Winnemucca District. Construction will likely begin within two years providing that the feasibility study shows favorable results.

The average yearly residential heating cost for the Winnemucca-Elko area runs about $30 per month using natural gas (Southwest Gas, August 1979). Comparatively, heating cost using fuel oil would run about $57 per month and propane about $54 per month. Electrical heating cost would likely run $75 to $90 per month on an average.

The Oregon Institute of Technology is presently being heated by the direct use of geothermal hot water. The average cost of heating, per square foot of building space, using geothermal hot water, is $.05/sq ft/month compared to $.50/sq ft/month using conventional fuel oil (Geo-Heat Utilization Center Quarterly Bulletin, May 1977).

PAA Table 4

Potential Amounts & Dollar Values of Geothermal Electrical Energy

KGA	Electrical Generation Potential(d)	Electrical Rates(c)	Yearly Dollar Value
Pinto	63 Megawatts/30 years (a)	Commercial	$25,938,360
		Residential	24,117,030
		Agricultural	17,936,100
Pinto	19 Megawatts/100 years (b)	Commercial	$ 7,822,680
		Residential	7,273,390
		Agricultural	5,409,300
Baltazor	27 Megawatts/30 years (a)	Commercial	$11,116,440
		Residential	10,335,870
		Agricultural	7,686,900
Baltazor	8 Megawatts/100 years (b)	Commercial	$ 3,293,760
		Residential	3,062,480
		Agricultural	2,277,600

(a) Electrical generating potential at a 30-year reservoir life.
(b) Electrical generating potential at a 100-year reservoir life.
(c) Electrical rates CP National, Winnemucca, Nevada. August 1979 Commercial=$0.0470/Kw hr., Residential=$0.0437/Kw hr., Agricultural=$0.0325/Kw hr.
(d) White 1975.

The above cost figure includes the annual operating expense plus the capital recovery on the present cost of the geothermal wells.

Using these figures, a home heated in Winnemucca by fuel oil at an average rate of $57 per month, could be heated for $5 to $6 per month using geothermal hot water.

It should be noted that costs may vary greatly from area to area. Factors which must be considered include temperature of the geothermal reservoir, depth, and water chemistry.

One company active in geothermal exploration and development in Nevada estimates that it could supply large-volume users of heat, such as food processors, with geothermal energy at approximately 66% of the cost of natural gas.

Bog, Howard, Dyke, Golconda, Hot Pot, and the Hot Springs have been identified as having good potential for nonelectric applications of geothermal energy.

Employment and Population Dependence on Public Lands

The Paradise-Denio Resource Area covers 5,127,054 acres, 4,281,695 acres of which is BLM-managed land and other public land. Much of the private land in areas with surface manifestations of geothermal energy, i.e., hot springs, has already been leased for geothermal resources. Most of the federal land is available for leasing and as of August 1979, 69 competitive and noncompetitive geothermal leases have been issued on public lands in the resource area, 17% of the leases issued with the state.1/

Because of the varied nonelectric uses of geothermal energy, it is difficult to project the effects development would have on employment and local business communities. It is likely that, as with electrical generation, local communities would be called upon to provide additional services.

1/ Competitive leases are issued on areas known to be valuable geothermal resource areas. These leases are offered at public auction where interested parties make bids, known as bonus bids, for the right to lease and develop the geothermal resouce. Noncompetitive leases are issued on all areas outside of Known Geothermal Resource Areas (KGRA). No competitive bidding occurs and no bonus bids are required.

Revenues

Fifty percent of the receipts from lease rentals, bonus bids, and royalties are paid to the State of Nevada. Rental fees for noncompetitive geothermal leases are $1/acre per year (minimum), and increase on a graduated basis after the fifth year. To date (1979) sixty-two noncompetitive geothermal leases issued in the resource area have yielded $123,572 annually. Seven competitive leases in the resource area have yielded $31,515.42 in bonus bids and an additional $27,028 annually in rental fees. To date, eighty-two competitive leases have been sold in Nevada, totalling 138,135 acres. Bids have ranged from $1.76/acre to $203.77/acre. Receipts from bonus bids total over $2.1 million for the state.

Royalties on production represent an additional source of revenue. Royalties of 10-15% of the value of the heat energy, and up to 5% of the mineral by-products and demineralized water are assessed by the federal government. At the Geysers steam field in California, a royalty of 10% of the steam value is paid to private landowners. The royalty averages about $250,000 per year per 100 MW plant (Brady Technical Paper, 1974).

Taxes on production also generate revenue. Taxes paid to Sonoma County, California, from the Geysers approximated $1 million per year for the 400 MW plant in 1974 (Brady Technical Report, 1974).

Income-Employment

Total Humboldt county employment by the minerals sector is 100 persons. Employment dependency derived from multipliers developed for the Humboldt-Lander economies indicates that 179 persons (4.7% of county employment) are directly or indirectly dependent on the mining industry for employment. Population dependence, determined from the population-employment ratio, is 353 persons (4.6% of population).

The estimated income of $267,000 (0.7% of income) does not reflect the true value of the mineral industry to the Humboldt County economy. Expenditures by the mining industry for exploration, and mine, pit and mill development, and construction are important sources of income for other sectors.

PAA Table 5
CURRENT MINERAL PRODUCTION STATISTICS
1978

Community and Unit	Production Total/year	Production Public Land	Number of Operating Mines or Mineral Operations	Number of Persons Engaged in Mining	Reserves	Known Occurrences on Public Lands
Locatable						
Gold, silver (tons of Ore)					4-5,000,000 at .08 to .5 oz./ton	Yes
Mercury, flasks	20,000	None	1	45	395,000	Yes
Tungsten, tons					5-800,000	Yes
Iron ore, tons					3-4,000,000	Yes
Barite, tons	W		1	2	Unknown	Yes
Gems & Semi-Precious Stones	Unknown	Some	7	11	Unknown	Yes
Uranium					Unknown	Yes
Leasable						
Oil an Gas					Unknown	No
Geothermal						
Direct Application					15.25 km3 1/	Yes
Electrical-Megawatts					10.5 km3 1/	Yes
Saline Playa Products					Unknown	Yes
Saleable						
Sand and Gravel	132,020		8	37	Large	Yes
Clay (tons)	1,000		1	3	2,500,000	Yes
Limestone/ Dolomite	W		3	7	Unknown	Yes
TOTAL			21	105		

1/ Value of geothermal reservoir
W Withheld to avoid disclosure of confidential data

PAA Table 6
ESTIMATED POTENTIAL MINERAL PRODUCTION STATISTICS
1990

	Potential Production		Potential Number of Mines or Mineral Operations	Potential Number of Persons Engaged in Mining	Impact on Public Lands
Community and Unit	Total/Year	Public Lands			
Locatable					
Gold, Silver (tons of ore)	100,000 oz.	Yes	2	50-300	1/ 2/
Mercury, flasks	20,000	Yes	1	60	
Tungsten, tons	3,000	Yes	2	200-250	
Iron ore, tons	100-150,000	Yes	1	10-20	
Barite	50,000	Yes	2	6-12	
Gem and Semi-Precious Stones	Unknown	Yes	7	15	
Uranium (excellent)	Unknown	Yes	2	200-400	
Leasable 3/					
Oil and Gas	Unknown (Poor)				
Geothermal					
Direct Application	Unknown (Good)	Yes			
Electrical Megawatts	90 MW/30 yrs	90 MW/30 yrs	2	20	
Saline Playa Production	25,000	25,000	1	25	
Saleable					
Sand and Gravel (tons)	200,000	Yes	10	50	
Clay (tons)	1,000	Yes	1	3	
Limestone/Dolomite	Unknown	Yes		10	
TOTAL			31	649-1,165	

1/ Public lands wil probably be patented under the 1872 mining law.
2/ Public lands may be required for mill sites and right-of-ways.
3/ Public lands will be leased for production

D. Minerals - Public Attitudes and Social Values

Local residents do not generally attach high social or cultural values to the mining industry except for the values many seem to place on old mining towns, freight and stage routes and other aspects of the early mining history of Nevada. Local people and outsiders alike consider these to be fascinating remnants of the early west.

Economically, the minerals industry is generally considered equally as important as the livestock industry as a provider of local jobs and as a contributor to the national requirement for mineral resources. It is not regarded to be a dependable contributor to the local economy, however. Getchell Mine was quoted as an example of a mine which was going strong one day and closed down the next. One positive aspect of the mining industry which was commented on was that when a mine closes down the miners depart rather than remaining in town and creating problems for the community.

In Denio, mining is considered to be presently of minimal economic importance to the community. In recent times, the main mining activity has been prospecting. As this has been of a transient nature, in general, no lasting economic benefits have been accrued by the town as a result. The opinion was expressed that large geothermal or mining development in the Denio vicinity would be detrimental to the area as they would destroy those qualities of isolation and ruralness which the area residents find attractive.

The reopening of the mine at Tungsten is generally considered by Winnemucca residents to be beneficial to the community.

In McDermitt, mining is presently the number one employer of community residents and further minerals development seems to be viewed favorably.

Several persons interviewed expressed a distaste for the scarring of the landscape associated with prospecting and to a lesser degree mining. Revegetation was recommended as a possible solution to the environmental disturbance caused by mining related activities.

Miners feel that the extraction of minerals is important to the local and national economies, and that environmental laws are placing the stability of these in jeopardy. The following statement by a prominent miner in the planning area seems to be fairly representative of the attitudes of area miners:

> "People have gotten so far from the land that they don't realize its importance. The survival of society is dependent on using the ground. The land should be taken out of federal control and turned over to the state for management. Most of the federal land is west of the Rockys and most of the nation's products come from west of the Rockys."
>
> "If the environmentalists keep having their way this nation will face the same situation with minerals in 10 or 15 years that it is facing with oil today. If the United States is the only country that enforces strict environmental laws we will be forced to buy from foreign countries which do not."
>
> "It is too expensive to refill holes. It would put many operations out of business. Environmentalists have already brought a lot of mines to a screeching halt. Environmental damage is the price of technology. To satisfy environmentalists, it would mean doubling the price of mining which in the end would lead to 8-fold inflation."
>
> "Minerals extraction is compatible with multiple use. National parks which allow the coexistence of minerals extraction ought to be established rather than wilderness areas."
>
> "It is not mining activity so much as prospecting which causes environmental damage. More money could be spent by the government on developing less environmentally damaging prospecting equipment rather than more regulations."

Area residents seem to be divided in their opinions concerning geothermal development. Many emphasize the positive aspects of its value as an energy source and the benefits to the county's economy, whereas others lament the loss of hot springs such as Brady which formerly were favored bathing pools for arthritics and other bathers.

FOREST PRODUCTS

A. Analysis

Local Production of Timber and Other Forest Products

No timber production occurs on any lands within the planning area. Production of forest products is limited to firewood, poles, and posts. None of these products are available in significant quantity or quality to support commercial usage.

Production of juniper is ample to provide low quality posts and fuel wood for private use at the local level. The demand for posts is low due to the remoteness of the juniper stands from which the posts are derived, and also the presence of an outside commercial source. Local demand for fuel wood is higher than for posts. Only two permits for a total of 6 cords of firewood and no permits for posts have been issued in the planning area since 1974. Considerably more forest products have been removed but no estimate can be made of this usage. The presence of a more extensive, less remote source occurring on lands administered by the Forest Service has caused consumption of fuel wood from BLM lands to be insignificant. Due to the continuing energy shortages, it is believed that the demand for fuel wood will increase, and the supplies available on BLM lands will become more attractive.

The large distance of the planning area from major population centers results in a complete lack of regional demand for fuel wood. Even with increased consumption, forest products will not be a significant element of the local economy.

B. Forest Products - Public Attitudes and Social Values

The predominant public attitude toward forest products is that the Bureau of Land Management should provide a source of forest products on public lands and should not restrict the locations from which wood can be removed.

RANGE MANAGEMENT

A. Analysis

Livestock production is a major industry in Humboldt County. The county, in turn, accounts for a significant element of the state's livestock industry. The 1977 population of domestic livestock (64,000 cattle, 4,000 sheep) represents 10% of the state population. The public land impact on this industry is substantial, accounting for approximately 28% of the forage consumed within the county.

For 1977, the forage consumption on public lands was 217,579 AUMs.[1] The total preference[2], the amount of forage (AUMs) that could be authorized each year, is 264,014 AUMs. Caution should be used not to infer any significance between authorized use and actual forage consumption. A number of licensees will pay for their full authorizations, but will not make full use of them due to an unfounded fear that authorized nonuse will result in a reduction of their forage entitlement.

A number of allotments within the county have been identified[3] which require adjustments to their allowed periods-of-use. These adjustments primarily concern those allotments where the authorized grazing begins too early in the spring. Early grazing has resulted in a decline in the percent composition of perennial grasses (the desirable livestock forage species). Early grazing prohibits the storage of food material in the roots, eventually causing the death of the plant. On many favorable sites only remnants of perennial grasses remain. The Paradise and Denio Range URAs have identified inappropriate periods of use as a contributing factor to the generally declining trend in range conditions.

[1] AUM (Animal Unit Month) means the forage consumed or grazing privilege represented by the grazing of one cow or its equivalent for one month. For the purposes of this definition, one cow shall be considered the equivalent of one horse or five sheep or five goats (CFR-43-4200.0-5[h]).

[2] The Paradise-Denio Resource Area administers portions of two allotments in the Elko District and two allotments in the Vale, Oregon, District. The licensees who graze their livestock on these allotments also graze within the resource area. The Paradise-Denio Resource Area also administers portions of two allotments in Oregon. Statistical data and information regarding the allotments is not included or considered in this PAA section.

[3] Paradise and Denio Range URAs.

Public range within the county is generally grazed on an eight-month-on and four-month-off basis. Until a few years ago many operators grazed their livestock on public range year round. The result was a decline in range conditions that caused the BLM to initiate allotment management plans and to enforce grazing regulations. At present only a few operators graze more than eight months on public range. Allotment management plans exist for about 41% of the allotments within the county. Under these plans one-third of the allotment is rested each year, allowing forage plants to regenerate during the critical part of the growing season.

Several allotments have been identified where the forage demand by grasshoppers, harvester ants, rabbits, ground squirrels, wild horses, and burros is excessive. Only the wild horse and burro use can be quanitified. Wild horse and burro forage consumption is measured on the same basis as livestock consumption, by AUMs. A wild horse or burro AUM is the equivalent to the forage required to feed one cow, at least six months of age, for one month. In 1977, 4,424 wild horses and burros consumed 53,088 AUMs in Humboldt County. The yearly recruitment rate 1/ for wild horses and burros is 14%. At this rate of increase, wild horses and burros consumed 60,520 AUMs in 1978. The 1978 range survey indicated that there are 103,721 AUMs in the Paradise-Denio sector of Humboldt County. An additional 14,226 AUMs have been estimated for the Sonoma-Gerlach sector of the county, for a total of 117,947 AUMs. This means that in 1978 wild horses and burros consumed 51% of the available forage. At present no AUMs are allotted to wild horses; consequently, competition for forage between livestock and wildlife (particularly wild horses) contributes to the current decline in range forage conditions.

1/ The annual excess of colts surviving to maturity over all herd mortalities.

B. Local Significance

At present there are a total of 264,014 AUMs authorized (active preference) on public land within the county. In 1977 livestock actually consumed 217,579 AUMs, 82% of authorized use. The impact of the livestock grazing industry on the Humboldt County economy is shown on PAA Table 7.

PAA Table 7
Significance of Humboldt County Livestock Industry 1977

	County	Public Land
Forage Consumption (AUMs)	777,600	217,579
Income 1/	1,087,751	304,570
Percent of County Income	2.96	0.8%
Income Multiplier 2/	2.23	2.23
Direct and Indirect Income	2,425,685	679,191
Employment 3/	116	32
Percent of County Employment	3.0	0.8
Employment Multiplier 2/	1.645	1.645
Direct and Indirect Employment	191	53

1/ Calculated in terms of livestock receipts to total agricultural receipts ratio (0.23) in Humboldt County.
2/ Multipliers from Water for Nevada. Input Output Model.
3/ Determined by dividing livestock industry income by average income per employee in the agricultural sector.

The livestock industry is directly responsible for approximately three percent of both income and employment in the county. Industry multipliers, derived in the Water for Nevada (1977) series of reports, indicate that total income and employment, both direct and indirect, is $2,425,685 and 191 persons, respectively. These figures represent 6.5% of county income and 5.0% of employment. Population dependence (the number of persons supported by) on the livestock industry, based on a population-employment ratio of 1.97, is 228 people directly and an additional 148 persons indirectly.

The importance of public land to the livestock industry is greater than the figures in PAA Table 7 would suggest. Public land provides forage during the critical spring and summer periods. Roughly 85% of the forage during these periods is provided by the public land.

C. Additional Analysis

Regional Significance

Disregarding those allotments administered by the Winnemucca BLM District that are situated outside the district boundary, there are 427,647 AUMs of active preference in the district.[1/] Public land in Humboldt County provides 264,014 AUMs or 62% of the district total. On a statewide basis, public lands in Nevada provided 1,726,903 AUMs of actual forage consumption in 1977. The Humboldt County total of 217,579 [2/] AUMs of actual consumption represents 12.6% of the state total.

[1/] Source: Annual Grazing Statistical Report 1976. District file #4115.16. Note: This report did not include AUMs within the district and administered by other districts. These AUMs were added to reflect the total active AUMs within the district.

[2/] There are 16,276 AUMs within the Paradise-Denio Resource Area administered by other Bureau Districts, these AUMs were added to those administered by the Winnemucca District.

Operator Dependence on the BLM

There are 89 livestock operations partially or wholely within Humboldt County with public land grazing privileges. These operators are dependent on public land for 28% of their forage requirements on a yearly basis. During the spring and summer months, however, operator dependence on public land forage is as high as 85%.

An analysis of the costs and returns, and management practices of range livestock operations in the northeastern sector of Nevada (which includes Humboldt County) was published in 1977 by Burke Mitchell and James R. Garrett of the Univeristy of Nevada, Reno.[1] Although the analysis was completed using 1972 data it is the most detailed yet published, and should be generally applicable to existing operations. Range livestock operations were categorized into three sizes:

Small - less than or equal to 350 animal units
Medium - more than 350 animal units but less than 800 animal units
Large - more than 800 animal units

Livestock operations were also segregated by type of operation into cow-yearling operations, where the average number of yearlings was greater than one-fourth of the average number of calves, and cow-calf operations where the average number of calves is more than three-fourths the average number of yearlings. Data on the value of assets, operating expenses, receipts and income on a per ranch and per animal unit basis is presented in PAA Table 8.

The value of the land asset is the largest constituent of the value of assets. It is particularly significant for small size ranches where 73% of the total assets is in the land. Many of the small ranches are near towns or have attractive features, such as meadows or pasture land, consequently the large percentage of the land asset and the high land value per animal unit ($1,349 per animal unit) may be due to the speculative value of the land.[1] The value of land assets per animal unit generally increased as ranch size decreased. Per animal unit land values for medium and large size ranches probably reflect their worth as livestock producing units more accurately.[1] Of the other asset values those in buildings and other capital equipment show some economy of scale tendencies.[2]

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[1] Mitchell, Burke and Garrett, James R. Characteristics of the Range Cattle Industry, 1972, Region III Northeastern Nevada. Agriculural Experiment Station UNR (1977).

[2] Economy of scale tendencies occur when an operator can obtain more than proportionate increases in total output from additional units of input.

Economies of scale are also evident when average operating expenses of the different ranch classes are compared. Operating expenses increased in relative terms as ranch size decreased. The major cost elements are labor, depreciation, and feed purchases. Federal grazing fees represent 2.5%, 6.3% and 7.8% of costs for small, medium and large ranches, respectively.

PAA Table 8
Summary of Ranch Assets, Operating Expenses
Receipts and Income 1972 [1]

	Ranch Size			Livestock System	
	Small	Medium	Large	Cow-Calf	Cow-Yearling
Value of Assets					
-Per Ranch	420,677	575,565	2,364,666	1,372,913	1,588,513
-Per Animal Unit	1,853	1,098	1,047	1,227	866
Average Operating Expenses					
-Per Ranch	26,750	40,081	141,853	75,521	119,677
-Per Animal Unit	117	76	63	67	65
Average Receipts					
-Per Ranch	34,830	71,998	201,161	112,193	167,285
-Per Animal Unit	153	137	89	100	91
Net Ranch Income					
-Per Ranch	972	16,733	39,856	25,476	18,872
-Per Animal Unit	4	32	18	23	10
Return on Total Assets	.23	2.91	1.69	1.86	1.19

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[1] Mitchell, Burke and Garrett, James R. Characteristics of the Range Cattle Industry, 1972, Region III, Northeastern Nevada. Agricultural Experiment Station UNR (1977).

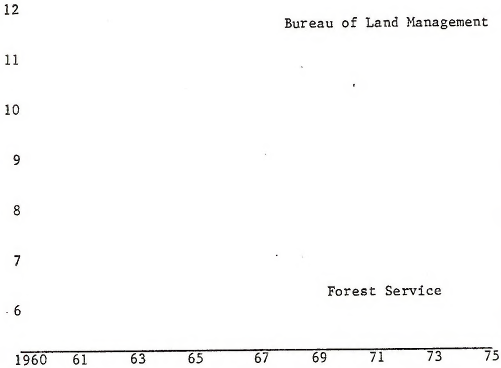
Ranch receipts increased with ranch size; however, medium size ranches had the greatest return on assets. Net ranch income was computed by subtracting expenses, a $7000 charge for the operator's labor and management, and adjusting for the change in inventory. Cow-calf operations had lower receipts than cow-yearling operations but greater net income and a higher return on assets.

The 1972 study was compared with a similar study done in 1963 to evaluate changes in ranching methods. The results indicated that management practices have changed only slightly and that ranch performance, measured in terms of calving percentage and weaning weights, has not improved measurably even though there has been an increase in the use of pregnancy testing, the use of concentrates, and some adoption of better haying techniques.

D. Current Trends and Demand Protections

A steady trend of declining numbers of licensees, livestock, and AUMs is evident in the livestock industry on both a local and regional level. Nevada's cattle count for January 1, 1978, was 570,000 head, down 5% from 1977 and 14% from the record of 664,000 head in 1974. Sheep numbers also continued their long decline. The January 1978 sheep count totalled 114,000 head for the state, down from the 1977 total of 133,000 and the record 1,340,000 head of 1920.[1] Graph PAA 1 illustrates the declining trend in livestock use of BLM and Forest Service land.

PAA Graph 1



Million AUMs of authorized or permitted use by domestic livestock on BLM administered lands and on National Forest System lands in eleven Western states, 1960-1975. Sources: Public Land Statistics, Annual Grazing Reports. [2]

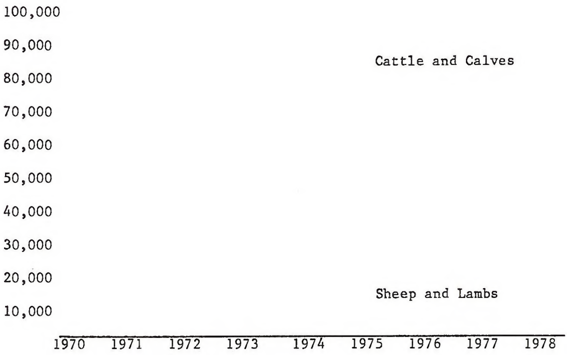
[1] 1977 Nevada Agricultural Statistics

[2] E. Bruce Godfrey, Rangelands VI, No. 3 (June 1979)

E. Local Demand

Livestock numbers and the demand for public land forage at the local level are also declining, reflecting the regional trend for domestic livestock in Humboldt County from 1970 to 1978.

PAA Graph 2 1/



Livestock in Humboldt County 1970-1978

The number of licensed AUMs in the Winnemucca District decreased from 330,050 in 1976 to 261,076 in 1977, a 21% decrease. The number of authorized AUMs in Humboldt County was 264,014 in 1977, licensed use, however, was 217,579 AUMs. The 1978 range survey for the Paradise-Denio Resource Area indicated that there are only 103,721 AUMs of available forage. If this figure is expanded to include all public land within the county, available forage would amount to 131,367 3/ AUMs. The Bureau is required by law (Taylor Grazing Act of 1934 as amended and

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1/ 1974 and 1977 Nevada Agricultural Statistics.
2/ Bureau of Land Management, Nevada Statistics 1978.
3/ Public land within the resource area is 82% of public land within the county.

supplemented) not to allow grazing use in excess of the recognized carrying capacity. In order to comply with existing law a downward adjustment of approximately 50% is required in terms of authorized active preference and 40% in terms of actual licensed forage consumption on public lands within the county.

Livestock demand projections for public land forage can be roughly estimated if it is assumed that past trends will continue into the future and that public land will maintain its current level of significance. Cattle numbers declined by 19% between 1973 and 1978; at this rate demand for forage should decline 38% by 1990. If public land maintains its current share of total county forage (28%), 134,899 AUMs of forage from public land will be required. This figure however does not consider the results of the 1978 range survey. The survey (extrapolated to include all public land in the county) indicates that available forage is only 131,367 AUMs. If grazing privileges are adjusted to reflect the results of the survey, it is anticipated that range conditions will begin a general upward trend and should easily exceed the projected 134,899 AUM demand well before 1990. This demand figure should be considered a rough estimate only. The demand for public land forage is affected by several factors. Trends in these factors are difficult to predict. The price of beef has been an important factor influencing cattle numbers in the county. Beef prices have fluctuated widely over time and there is no reason to think they will not continue to do so in the future. The price of hay is another factor, in years with high prices operators will increase the amount of private acreage devoted to hay production reducing the amount available for forage and thereby increasing demand for public land forage. The price of AUMs also affects demand. The BLM was instructed by the Bureau of the Budget to charge full market value for products, including forage, derived from federal lands. The price of public land AUMs had been well below that of private AUMs. Due to political delays federal AUMs still do not reflect full market value but should the political constraints be released and the price of federal AUMs increase, then the demand for public forage should decrease. The quality and quantity of public land forage is another factor. The Range Improvement Act authorized funds for range improvements, but to date funds have not been made available. Should there be eventual funding, and range improvements such as seedings, sprayings, water developments, etc. are implemented, then both the quality and quantity of federal AUMs should increase, thereby exerting a positive impact on demand.

Additional demand for public forage comes from wild horses and burros. At present no AUMs are allocated for this purpose although future plans may include forage allocation to wild horses and burros. In 1977, 4,424 wild horses and burros consumed an estimated 53,088 AUMs of public forage. Future plans call for a reduction in their numbers but their population will depend on the available forage. No estimates are available on a county basis to date.

F. Range - Public Attitudes and Social Values

In general, residents of the planning area perceive the livestock industry to be both socially and economically important to the welfare of their communities, the county, and the nation. This conviction may be attributable, in part, to the fact that historically agriculture has been one of the two major industries in this area, mining being the other. Several other factors contribute to this attitude, however.

The prevailing opinion among area residents is that beef is practically as essential to America as oil, and that even if the county's livestock industry does not make an immense contribution to the nation's total beef production, it is still a part and every little bit counts. Therefore, it is felt the industry should be protected and encouraged. Similar sentiments are expressed regarding the relatively small contribution to the local economy made by the livestock industry. Their position is that even though the county also has tourism, mining, and other agriculture, it is sounder economic reasoning to retain all four of these industries rather than be dependent on the remaining three. Mining is considered to be mercurial and undependable as far as lasting economic benefits to the region. The potato industry currently is in very poor financial condition due to depressed potato prices. Tourism is felt to have great potential here and yet even its future is uncertain because of gas shortages associated with the national energy crisis.

In small communities where a large percentage of the population is involved in ranching, the feeling is that the livestock industry is vital to the local economy. Also involved in the residents' perception of the significance of the livestock industry is the fact that while the loss or reduction of grazing privileges on public lands would apparently have minimal impacts on the local economy, the impact on the individual rancher would be devastating.

The ranchers themselves place a high value on the lifestyle associated with ranching. Ranching is rarely a lucrative business for the small operator. For many of them it is more a preference for the lifestyle than economic considerations which makes ranching attractive and which motivates them to strive for the preservation of this institution. Some of the planning area's ranchers are newcomers who have left better paying and less physically demanding jobs for this life. Most, though, come from generations of ranchers. For these, ranching is generally the only life they know and the only one they feel they can live comfortably with.

Traditionally, rugged individualism and pride in their ability to survive and succeed in the arid and sparsely vegetated environment of the Great Basin have been characteristics associated with the Nevada rancher as well as all the colorful aspects of buckaroo life. To a large extent these are still valued and practiced by the planning area ranchers. Other attributes of this lifestyle which they find to be desirable include: being able to work with animals; riding horses; working outside and being close to the earth; and the tranquility of living in relatively isolated areas. One rancher's son commented that rural people were more friendly than urban people because living in more isolated areas they had to depend on each other more. It was felt that there is more mutual concern for each other's welfare in small rural communities. Also, community gatherings were described as being very warm experiences because, it was explained, isolation makes contact with one's neighbors a treat.

Additionally, ranching is viewed by ranchers as being beneficial to family life. The family generally works together to make the ranch work. Some small ranches are totally family operated. This gives the parents more opportunities to be with their children and for children to learn responsibility at an early age. Juvenile delinquency and other problems associated with urban young adults were mentioned as being less prevalent due to unoccupied time being more scarce. Beyond this, it is felt that children learn to make do with what there is since isolation limits the possibilities of replenishing supplies in town. One other institution commonly associated with small agricultural communities, the one-room school house, was cited as being able to provide an education styled more to individual needs and oriented toward the needs of a child growing up in an agricultural community. A more intimate learning atmosphere was felt to prevail, owing to the small number of students.

A final aspect of ranching life that was considered desirable was the ability to grow much of their own food. Home grown food was considered to be healthier, more savory and less costly than store-bought products.

Non-ranching residents of the planning area generally feel that ranching has social and cultural values. Many feel that this institution is an essential ingredient of the rural atmosphere which for them makes this area an attractive place to live.

Ranching is considered a culture in its own right, a unique lifestyle which has persevered relatively unchanged for the past hundred years, but which still exists in only a few parts of the country. One interviewee stated that the area would "lose its context" if it lost the ranchers. People remarked on the colorful traditions, associated with ranching which contribute to the ruralness of the community, e.g., rodeos, state fairs, horse shows, 4-H, and community gatherings such as the Father's Day picnic in Paradise.

Ranchers were also mentioned as being respected and responsible citizens in the community who could be depended upon when help was needed although one person felt that they could provide a lot more financial support for community projects than they have in the past.

An article in the Journal of Range Management, June 1979, by Patrick Jobes, associate professor of Sociology at Montana State University, is pertinent to the discussion of the socio-cultural values of the ranching industry. Mr. Jobes suggests that the rancher is an endangered species. He points out that while preservation of the physical environment is currently given tremendous weight in land use decisions, preservation of the social environment is rarely given any consideration at all. In the following quote he discusses the value of preserving rural ranch society:

> "Humans are felt to be capable of readapting to their altered environments, as indeed they area. Even the ranchers most adamantly opposed to development will not die from development. But, their way of life will cease to exist as they lose in the competition for their land . . . Somehow this emphasis of placing the physical environment in a more primary position than the social environment seems topsy turvy. The way of life and the feeling of persons are the genuinely unique characteristics of humans and these are the characteristics which have emerged as most negotiable or ignored when decisions on land use are made. After all, among humans it is the manner in which life takes place rather than the mere survival which distinguishes from other species. Certainly the variety of lifestyles deserves protection as much as do the lives of lesser species." (p. 328.)

A summary of prevalent local attiudes toward public lands as they involve grazing is as follows:

1. Grazing is compatible with mutliple use.

2. Other uses of public land have their place so long as they do not jeopardize grazing.

3. The rancher is being regulated out of business. Ranchers maintain that during the last few years government regulations have increased incredibly, throttling the industry they are supposed to help.

4. Everchanging BLM policies make it difficult for the rancher to plan for the future.

5. Environmental protection has its place but grazing should not be jeopardized by it.

6. The BLM should take positive action to improve range conditions such as seeding projects and better management plans.

7. Protecting wild horses at the price of sacrificing grazing is not justifiable.

8. Range decisions should be made on a scientific bais.

The Nevada Outdoor Recreation Association and the Sierra Club have been supportive of BLM grazing management policies. (Peggy McGuckian, PAA interviews, August 1979.)

WILD HORSES AND BURROS

A. Analysis

The wild horse and burro management program is closely related to the range management program. Competition for the available range forage among wild horse and burros, livestock, and other wildlife means that cooperation among the respective programs is necessary for effective management of the forage resources on the public range. The current range program allocates a small quantity of forage to wildlife with the remainder allocated to livestock. This program does not allocate any forage to wild horses and burros even though an estimated 53,088 AUMs of forage (24% of licensed livestock use) was consumed by wild horses and burros in Humboldt County in 1977. The 1978 range survey indicates that there is insufficient forage to meet current licensed livestock requirements alone. Thus the impact of omitting forage allocation to wild horses and burros has been stiff competition for diminishing forage resources and contribution to the general deteriorating range conditions.

In the past wild horses were gathered and sold for slaughter or private use. This practice was halted with the passage of PL 92-195, the Wild and Free Roaming Horse and Burro Act. The result was a change in the value of wild horses and burros from an economic value to an esthetic and socio-cultural value. The esthetic and socio-cultural values of wild horses and burros are generally expressed in terms of the value of recreational viewing and the values gained through the enjoyment of others or through the knowledge that wild horses and burros exist on the range whether the individual ever sees them or not (the vicarious value). Due to the absence of data regarding the number of visitor days of recreational viewing and other nonconsumptive uses it is not possible to derive an estimate for the esthetic and socio-cultural value of wild horses and burros on public rangelands. Generally it is felt that much of the value of wild horses and burros lies in their scarcity. As their numbers increase and sightings become more common the value of the individual experience decreases. The current trend of increasing numbers has made sightings common particularly along U.S. 95 north of Winnemucca and Interstate 80 south of Winnemucca. At some point the aggregate value of increased sighting peaks, and then begins to decline as the value of each individual sighting decreases.

Wild horses and burros are responsible for a number of negative impacts to the range. They consume valuable forage, causing (with present cattle numbers) a deterioration of range conditions and thus a reduction in wildlife numbers, and decreasing the number of livestock that can be grazed on public land. They are partly responsible for watershed damage in areas of severe overgrazing due to the accelerated erosion caused by horse trails and the disruption of normal streamflows caused by compaction. At present, it is not possible to estimate the reduction on wildlife numbers or the damage to watersheds caused by wild horses and burros, consequently their negative impacts must be estimated in terms of the value of forage they consume. The fair market value of an AUM in terms of its rental or lease value, not its value as a ranch asset, was $6.70 in 1977. The 1977 wild horse and burro population of Humboldt County was estimated at 4,424 animals. At the value of $6.70 per AUM they consumed $355,690 (4,424 animals x 12 AUMs per animal per year x $6.70 per AUM) worth of forage in 1977. The income loss to livestock operators resulting from wild horse and burro forage consumption was $74,323. 1/ The total direct and indirect income loss to all sectors of the Humboldt County economy due to wild horses and burros was $165,634. 2/

Current proposals call for the maintenance of wild horse and burro populations at numbers significantly below those currently on the public range. Therefore the cost of roundup and maintenance until adoption is an additional factor that can be considered in the economics of wild horses and burros. Organized roundup operations were initiated by the BLM in 1977. Due to the inexperience of the operator's gathering and maintenance, costs ranged from $300 to $600 per horse. Since that time the operators have gained experience and efficiency has improved to the point where gathering and maintenance costs are now less than $90 per horse (Hal Pilkington, Palomino Valley Public Information Office, personal conversation 1979). Gathering operations should be a continuous element of the BLM's management program because of the current estimated 14 percent annual recruitment rate to wild horse and burro numbers.

1/ Computed on the basis of an income of $1.40 per AUM. This figure derived by dividing public land income $304,570 by public land forage consumption (217,579 AUMs) from PAA Table 7.
2/ Computed on the basis of a combined direct and indirect income of $3.12 per AUM, this figure was derived in the same manner as that above from PAA Table 7 ($679,171 direct and indirect income ÷ 217,579 AUMs).

Total costs of the annual gathering necessary to maintain a stable population will not be known until the numbers that will be maintained at stable levels in Humboldt County are determined.

In summary the value of wild horses and burros has changed from an economic to an esthetic and socio-cultural value. It is not possible to measure this value due to the absence of data. The negative impacts of wild horses and burros result from the forage they consume and the watershed damage they cause. The only impact which can be measured is that of forage consumption which results in a total income loss to the county of $165,634. The cost of annual gatherings, in order to maintain a stable population, is an additional factor affecting the eocnomics of wild horses and burros.

B. Wild Horses and Burros-Public Attitudes and Social Values

The national attitude toward preservation of wild horses is favorable, as evidenced by the passage of the Wild Horse and Burro Act. Most people in the United States have never actually observed a wild horse first hand and for them there is a somewhat mystical feeling attached to knowing that one day they might see one running free in its natural environment.

Several groups are devoted to the protection and preservation of wild horses and burros. Generally, the position of these organizations is that minimal control of wild horse numbers is desirable. These groups exert strong influence over the general public and are looked upon as the watchdogs of the wild horse and burro populations. Because of this image most people not closely involved with wild horses and burros adopt the standards of these organizations. This is a large part of the reason why the national attitude is slanted the way it is. The social values of the general public would probably be less emotional if the exact number of wild horses and burros were known. If it was general knowledge that the wild horse is in no danger of becoming extinct and that there are areas where the populations are dangerously high, proper management might be allowed (Paul Jancar, Wild Horse and Burro Specialist, Winnemucca District, July 1979).

Wild horse protection societies vary in their approaches to management of wild horse populations. WHOA supports multiple use and habitat management while AHPA holds the attitude that horses should be left alone for nature to take care of. A number of specific recommendations and positions have been expressed by these groups concerning management of wild horses. Some of these are as follows:

1. There should be more range riders.

2. More consideration of the foaling season should be given when roundups are planned.

3. Horses should be temporarily sterilized to control population growth.

4. AMPs are opposed if fences are involved.

5. They are unenthusiastic about wild horse sanctuaries because they fear that the least desirable areas with the most rugged terrain will be allotted for this purpose (Bert Bresh, Sociologist, NSO--from interviews with wild horse groups).

Local attitudes differ radically from national attitudes. The ranching community is valued highly socially, culturally, and economically by local residents. Wild horse protection policies are viewed as a threat to the continuing existence of the rancher. Most people who live in this area feel that the passage of the Wild Horse and Burro Act was a highly emotional action which totally lacked economic and scientific basis. It is believed that a much more perfect balance was maintained between cattle and horses before the enactment of this law when the mustanger harvested the horses. Most local people feel that a return to this sort of arrangement, with some controls being instituted to prevent abuse of the horses, would be the best system. As this would require changing the present law, most favor cutting the herds back to reasonable numbers and maintaining these numbers. The ranchers in particular favor harvesting the horses on a profitable basis and utilizing the earnings on such things as range improvements. They point out that U.S. Fish and Wildlife Service successfully manages the wild horses under its jurisdiction in this manner. Ranchers generally place little social value on wild horses beyond the pleasure they used to derive from running them and rounding them up occasionally. Many ranchers equate wild horses with cattle as far as socio-economic values. They feel the horses should be considered for their meat value rather than esthetic qualities. Most ranchers do not object to preservation of wild horses for those people who do place a high value on them as long as grazing rights are not cut back as a result.

Even those persons in the area who feel that the wild horse has socio-cultural value esthetically and in terms of its being part of our national heritage appear to generally hold the opinion that wild horse protection should not jeopardize the ranching industry. Sanctuaries are seen to be a viable solution by this segment of the local population.

Area residents were critical of the expense of the wild horse program which they feel is unjustifiable. They believe that the current problems with wild horses were created by the Wild Horse and Burro law. It was pointed out that before the enactment of this law the herds did not require a lot of taxpayer dollars to maintain. There was no danger of wild horses becoming extinct, they feel. Also, then they were utilized while now they are not. Considerable doubt was expressed about the Adopt-A-Horse program as well. Interviewees felt that many of the people adopting horses have little knowledge of proper equine care. Examples of cramped, unsheltered pens, and inadequate feeding were quoted as having been observed.

It is felt that people who do not live in the vicinity of wild horse populations have a romanticized vision of the wild horse derived from watching noble palominos with flowing manes lope in slow motion across the silver screen and from reading elegant descriptions of them in western novels. Several local people expressed the opinion that the majority of the planning area's free-roaming horses are rough-looking range horses which they don't find to be particularly stirring to look at. They also emphasized that the notion of the horses being wild mustangs was incorrect as they are actually descendants of horses which escaped from ranchers. As such, local people consider the horses in actuality to belong more to Nevadans than to the national public (Peggy McGuckian, PAA Interviews, August 1979).

WATER RESOURCES

A. Analysis

The estimate of water supply and use presented in this report are derived from the "Water for Nevada" series of reports prepared by the Nevada State Engineers Office. The state has been divided into numerous hydrographic basins or regions, parts of four of these regions or basins lie within Humboldt County. Average annual precipitation varies from basin to basin but ranges from 7.2 to 14.4 inches. Estimates of water supply by hydrographic region appear in PAA Table 9.

PAA Table 9
Hydrographic Regions and Basins in Humboldt County [1]

Hydrographic Region	Annual Runoff [2] (Acre Feet)	Safe Yield of Groundwater Basins (Acre Feet)	Groundwater in Storage [3] (Acre Feet)
Northwest Region	40,400	22,000	922,000
Black Rock Desert	184,200	146,900	20,113,000
Snake River Basin	8,000	1,000	Minor
Humboldt River Basin	System Yield within Humboldt County is 102,100 Acre Feet [4]		
TOTAL (excluding Humboldt River Basin)	232,000	169,900	21,035,000

[1] Data derived from Water for Nevada, Report No. 3, Nevada's Water Resources prepared by the State Engineers Office. Individual quantities estimated by summing quantities listed for basins within Humboldt County.

[2] Care should be taken not to assume that the total quantity of annual runoff is recoverable, the seasonal nature of runoff and lack of adequate dam sites makes recovery difficult. Recharge of some runoff will also result in some double counting of water resources in the basins.

[3] Goundwater in storage in top 100 ft. of saturated alluvium.

[4] Prior appropriative rights downstream from Humboldt County prevent full utilization of Humboldt River water in Humboldt County.

Total dependable supply in Humboldt County is 504,600 acre feet annually. Withdrawals and consumptive use by type of use are presented in PAA Table 10.

PAA Table 10

1969 Withdrawal and Consumptive Use (Acre Feet)
for Humboldt County

Source	Irrigation	Public Supply	Self Supplied Industrial	Rural Usage	Total Withdrawals
Wells	115,000	1,150	900	190	117,240
Springs	2,700	130		140	2,970
Streams	355,000	70		480	335,550
TOTAL	472,700	1,350	900	810	475,760
Estimated Consumption	236,000	480	100	350	236,930

Agriculture accounted for 99% of withdrawals and consumptive use. Approximately 473,000 acre feet were withdrawn for the irrigation of 106,000 acres in 1969. In 1978 there were approximately 164,000 acres of irrigated cropland in the county. Water withdrawn to meet the additional demand for irrigation water has been met generally through well development. 1/

The completion of the North Valmy Power Plant will result in a consumptive demand for an additional 3,830 acre feet per year per 250 megawatt unit. 2/ Completion of both units will require approximately 8,000 acre feet per year. Water demand will be met through the construction of nearby wells for which permits have already been granted.

1/ General Plan.
2/ EIS Sierra Pacific Power Co.

Although, in total, dependable supply exceeds annual withdrawals and annual consumptive use within Humboldt County, there are a number of individual basins in which safe yield of the groundwater system is exceeded by the withdrawals. These basins (a total of seven) have been designated by the State Engineer as critical groundwater basins. No well can be drilled within a critical groundwater area without the permission of the State Engineer, except for domestic wells with a yield of not more than 1,800 gallons per day. The current trend towards increased utilization of groundwater and allocation of groundwater permits beyond safe yield is expected to continue in the future. This trend will probably result in the designation of a greater number of critical groundwater areas within the county.

Projections for future water requirements appear in PAA Table 11.

PAA Table 11
Water Use Growth Projections

User	1980 Estimated Withdrawals (Ac/ft)	2000 Estimated Withdrawals (Ac/ft)
Municipal and Industrial	2,600	3,400
Mining	917	15,043
Agriculture	481,668	603,824
TOTAL	485,185	622,824

The greatest percentage increases in water usage are expected in the mining industry, and in the cultivation of alfalfa hay and potatoes. Water withdrawals for the cultivation of alfalfa hay are projected to amount to 240,435 acre feet by the year 2000, 39% of total county withdrawals. Total withdrawals are expected to exceed dependable supply sometime in the period between 1980 and 2000. Consumptive use, however, is currently about 50% of withdrawals. 1/ There is also a large groundwater reservoir within the county, consequently, supplies should be adequate for meeting projected demand through the year 2000.

1/ Withdrawals refer to the total quantity of water diverted form surface water sources or pumped from groundwater aquifers. Consumptive use refers to that water withdrawn, that is actually consumed for agricultural, mineral, industrial, or domestic purposes or is so deteriorated in quality as to be unsuitable for further use. The difference between withdrawals and consumptive use is that water which is withdrawn but not consumed and that returns to a surface water source or percolates into the groundwater after passing through the process for which it was originally withdrawn.

B. Watershed and Air Quality - Public Attitudes and Social Values

Most residents of Winnemucca and rural residents of the planning area consider the BLM's water right acquisition program to be unnecessary and a threat to the continued existence of the ongoing uses of the public lands.

Some local residents agree that accelerated erosion is occurring on the public lands and is caused by current land uses. These persons feel that watershed should be stabilized as much as possible but with minimal impact to ongoing uses.

The general opinion of area residents is that air and water quality are currently at an acceptable level and that most pollution occurring is natural. It is felt that the public lands, rather than the private sector, contribute the majority of the area's air and water pollution. Most would prefer that a local regulatory body be responsible for implementation of any pollution control measures.

In addition, users feel that access roads should be maintained in good condition. (Ted Angle from "208" Planning Meeting, March 1978, and individual contacts.)

WILDLIFE

A. Required Analysis

Humboldt County has substantial populations of several game animals. Species harvested from the county at rates significantly above statewide averages include antelope, chukar partridge, sage grouse, and mule deer. See PAA Table 13 for data on harvests and hunter days.

Antelope hunting is regulated by a quota system, which has resulted in the issuance of an average of 60 tags per year for the past 10 years in Humboldt County. The demand for antelope hunting is high, as evidenced by the seven to one application to allocated tag ratio. This figure underestimates the true demand due to the five-year prohibition on new tag applications after a successful application. Eighty-three hunter days (77% of the state total) were expended in the harvest of 47 antelope (13% of the state total) in 1977. Ninety-two percent (43 animals) of the harvest occurred on public lands in Humboldt County, indicating the importance of public land as antelope habitat and as a contribution to the high quality antelope hunting experience within the county.

Chukar hunting in Humboldt County accounted for 5,800 hunter days (17.7% of the state total) in 1977. Eleven thousand, nine hundred and forty one chukars (22.8% of the state total) were harvested, placing the county second only to Washoe County in terms of quantity of birds harvested within the state. Humboldt County contains over one million acres of chukar habitat, eighty percent of which lies on public land. The availability of water is a limiting factor to the growth of the population. Chukar population peaked in 1974, a year in which 42,000 chukar were harvested. Conditions such as weather, biological factors, and number of hunters combine to cause cyclic fluctuations in chukar population. After the peak in 1974 there was a decline in numbers, a trend which reversed in 1978. Chukar hunting, which accounted for forty-four percent of hunter days in Humboldt County in 1977, is expected to remain a stable and significant element in the hunting resources of the county.

Sage grouse is a third game species harvested at levels above the state average. The Humboldt County harvest of 1,148 birds represents 15.2% of the state total. Sage grouse hunters days (1,064) expended in this harvest accounted for 13.6% of the state total. Public land contribution to sage grouse hunting is significant, acounting for 93% of the county-wide harvest and hunter days. Sage grouse habitat conditions have declined due to overgrazing, seedings, and wildfire. The result has been a decline in numbers, and current sage grouse hunting conditions are rated as fair although interest is high.

Mule deer is the most popular big game species in the state. The Humboldt County harvest (423 animals) accounted for only five percent of the Nevada total but still ranked the county as fourth in the state. One thousand, seven hundred and thirty-five hunter days (13% of the county total) were spent in this harvest. The mule deer harvest is also regulated by a quota system. Six hundred and sixty-four tags were issued in 1977, but tags are issued on an annual basis and will vary with the deer population. Deer populations have declined during a long period due to deteriorated range conditions, drought, severe winters, and disease. Recent population surveys, however, indicate that deer populations may be recovering. Maintenance of critical winter ranges is important so that the overwinter fawn kill is minimized.

Pheasant and Hungarian Partridge are also harvested at relatively high rates when compared to the rest of the state. However, in terms of numbers harvested, neither species ranks very high. One hundred and four Hungarian Partridge (seven percent of the state total) and 645 pheasant cocks (13 percent of the state total) were harvested in the county in 1977.

Hunting quality for the remaining game species in the county is fair to good depending on habitat quality and number of other hunters. Quail, rabbit, dove and waterfowl account for 32 percent of the hunter days within the county. On a statewide basis none of these species account for more than four percent of the Nevada total.

A majority of the hunting within the county is by Nevada residents. Nonresident hunters accounted for only 1,649 (12%) of total hunter days within the county. Hunter days on public land (based on percentage of harvest on public land) amounted to 9,052 hunter days (65% of county hunter days).

Fishing in Humboldt County occurs along numerous perennial streams, four major reservoirs, and one lake. Approximately 42 percent of the stream fishing and 60 percent of the lake fishing occurs on public lands. Fishing has been a popular recreational pastime in the county for a long period. However, the quality of the fish habitat in a large number of perennial streams within the county has declined to the extent that the Nevada Department of Wildlife has deleted them from their stocking program. PAA Table 12 summarizes the habitat condition of a recent survey of fishable streams on public land within Humboldt County.

Humboldt County accounted for 18,190 angler days and 60,857 fish in 1977, 1.4% and 2.1% of the state totals. Of these quantities, anglers on public land were responsible for 46% of the total (42% of the stream fishing and 60% of the lake fishing). See PAA Table 15 for harvest and angler day figures.

PAA Table 12

Summary of Stream Habitat Condition

Condition	Percent Optimum of Habitat	Number of Streams in Class	Number of Miles of Stream in Class	Percent of Total Miles
Excellent	70+	2	7	3.3
Good	60-69	7	19.7	9.3
Fair	50-59	28	109.5	51.7
Poor	≤ 49	16	75.7	35.7
TOTAL		53	211.9	100.0

Fishing provided $21,897 in income to the county in 1977. Of this money, $10,292 (.03% of total county income) was generated on public lands. Employment derived from this income (calculated for an average income in the trade and service sectors of $9,921) is estimated at two persons for the county, one of which is employed from income generated on public land. Population dependence within the county, based on a population employment ratio of 1.97, is approximately 4 persons, 2 of which are dependent upon angling from public lands.

The demand for the fishing resource is related to population. Demand projections have been made on the basis of a 54% increase in county population by 1990 (see PAA Table 17). Currently, angling pressure does not exceed the capacity of the fisheries' resource. However, the ongoing deterioration of fish habitat will eventually reduce the resource capacity to the point where supply is exceeded by demand. To ensure a high quality angling experience it is necessary to protect the riparian habitat and watershed from natural or man-caused adverse impacts. This will depend on the degree of livestock management in the future and on the extent of riparian habitat improvement projects.

PAA Table 13

Humboldt County Hunting, 1977

	Harvest				Hunter Days				
Species	Humboldt County	% of State	Public Land	% of County	Humboldt County	% of State	Public Land 5/	Resident Hunter Days	Nonresident Hunter Days
Mule Deer	423 1/	5.0	389	92.0 3/	1,735 1/	1.9	1,596	1,448 1/	287 1/
Antelope	47 1/	13.3	43	92.0 3/	83 1/	7.7	86	NO DATA	
Sage Grouse	1,148 2/	15.2	1,068	93.0 3/	1,064 2/	13.6	990	1,064 2/	0 2/
Chukar Partridge	11,941 2/	22.8	9,553	80.0 3/	5,800 2/	17.7	4,640	5,089 2/	711 2/
California Quail	3,178 2/	4.4	381	12.0 4/	1,036 2/	3.1	124	843 2/	193 2/
Cottontail Rabbit	3,000 2/	4.2	2,100	70.0 4/	1,675 2/	3.5	1,172	1,582 2/	93 2/
Dove	2,364 2/	1.9	1,655	70.0 4/	521 2/	1.5	365	374 2/	147 2/
Waterfowl	1,533 2/	1.8	77	5.0 4/	1,193 2/	1.9	60	1,172 2/	21 2/
Hungarian Partridge	104 2/	6.9	5	5.0 4/	255	13.0	13	238	17
Pheasant Cocks	645 2/	13.0	6	1.0 4/	588	10.9	6	408	180
Total Hunting	24,383		15,277	62.6	13,950		9,042	12,218	1,649
Fish	60,857 6/	2.1	27,969	46.0 7/	18,190 6/	1.4	8,360	NO DATA	
TOTAL	85,240		43,246	50.7	32,140		17,412		

1/ "Big Game Investigations and Hunting Season Recommendations," 1978, Tsukamoto, NDF&G.

2/ "Upland Game, Migratory Game Birds, Fur Investigations, and Hunting Season Recommendations," 1978, Molini and Barngrover, NDF&G.

3/ Percentages derived from draft 1976 PAA for Paradise and Denio Planning Units.

4/ Personal communication with Les Boni and Carl Keller, BLM Wildlife Biologists.

5/ Hunter days on public land based on percent of harvest on public land.

6/ Nevada Department of Wildlife.

[redacted] P[redacted]nta[redacted]er[redacted] by[redacted]cul[redacted]ng [redacted]ent[redacted] st[redacted] ar[redacted]ke [redacted]itat[redacted] pu[redacted]c la[redacted]

PAA Table 14

Humboldt County
Furbearer Data 1977 1/

Species	Humboldt County	% of State	Public Lands 2/	Price per Pelt	TOTAL VALUE Humboldt County	TOTAL VALUE Public Land 2/
Beaver	47	6.3	32	9.22	433.34	295.04
Raccoon	4	3.1	3	19.89	79.56	59.67
Bobcat	91	3.2	63	173.94	15,828.54	10,958.22
Coyote	834	13.5	575	34.63	28,881.42	19,912.25
Badger	40	7.3	28	16.94	677.60	474.32
TOTAL	1,016	5.0	701		45,900.46	31,699.50

1/ Data based on information contained in "Upland Game, Migratory Game Birds, Fur Investigations, and Hunting Season Recommendations," 1978, Molini and Barngrover, NDF&G.

2/ Figures based on an assumption of equal trapping pressure throughout Humboldt County. Humboldt County is 69.3% public land.

PAA Table 15

Fishing Data 1977

	Angler Days				Harvest			
	Humboldt County	% of State	Public Land	% of County	Humboldt County	% of State	Public Land	% of County
Stream	12,733 1/	NO	5,348	42 3/	42,600 1/	NO	17,892	42 3/
Lake and Reservoir	5,457 1/	DATA	3,274	60 3/	18,257 1/	DATA	10,954	60 3/
TOTAL	18,190 2/	1.4%	8,622	47%	60,857 2/	2.1%	28,846	47%

1/ BLM estimate based on historical data. Seventy-eight percent of angler days at streams, 22% at lakes and reservoirs. Harvest estimate based on the same percentage.

2/ Fish and Game Angler Pressure, 1977, NDW.

3/ Stream, and Lake and Reservoir public land percentages based on 1976 PAA data for Paradise and Denio Planning Units.

PAA Table 16

Humboldt County Hunting and Fishing Generated Income and Employment

Wildlife Class	Visitor Days	TOTAL EXPENDITURES 1/ Humboldt County	TOTAL EXPENDITURES 1/ Public Land	INCOME 2/ Humboldt County	INCOME 2/ Public Land	% of Total County Income	EMPLOYMENT 3/ Humboldt County	EMPLOYMENT 3/ Public Land	% of Total County Employment
HUNTING									
Mule Deer	1,735	45,088	41,481	11,723	10,785	.03	1	1	.03
Antelope	83	1,272	1,170	331	304	<.01	0	0	0
Sage Grouse	1,064	17,478	16,254	4,544	4,226	.01	0	0	0
Chukar Partridge	5,800	141,849	113,479	36,881	29,504	.08	4	3	.08
California Quail	1,036	30,207	3,625	7,854	942	<.01	1	0	0
Cottontail Rabbit	1,675	35,097	24,568	9,125	6,388	.02	1	1	.03
Hungarian Partridge	255	5,159	258	1,341	67	<.01	0	0	0
Pheasant Cocks	588	21,331	213	5,546	55	<.01	1	0	0
Dove	521	18,556	12,989	4,824	3,377	<.01	0	0	0
Waterfowl	1,193	23,275	1,164	6,052	303	<.01	1	0	0
TOTAL HUNTING	13,950	339,312	215,201	88,221	55,952	.15	9	6	.16
Fishing	18,190	84,220 6/	39,587	21,897	10,292	.03	2	1	.03
Furbearers		45,900 4/	31,699 4/	20,013 5/	12,500 5/	.03	2	1	.03
TOTAL WILDLIFE	32,140	469,432	286,487	130,131	78,744	.21	13	8	.21

1/ Hunting expenditures based on $19.12 local expenditures/day by Humboldt County Residents; $15.32 local expenditures/day by other Nevada residents, and $79.81 local expenditures/day by nonresidents. Data derived from Garrett (1970) and adjusted for inflation includes costs for licenses and toys but does not include other fixed costs for equipment.

2/ Expenditures Multiplied by 0.26 equals Income (Multiplier for Income from "An Interindustry Analysis of the Elko County, Nevada," Malone and Detering 1969).

3/ Employment Calculated from Income/Employment Ratio for Trade and Service Sectors of Humboldt County Economy (9,921) Calculated by BLM, Winnemucca.

4/ Value of furs harvested in Humboldt County.

5/ Average income per licensed trapper in 1977 was $1,250.85 (NDF&G) the number of licensed trappers in Humboldt County is estimated at 16.

6/ Based on $4.63 expenditure per angler day in the county derived from "The Demand, Value, Economic Impact and User Characteristics of Four Outdoor Recreation Areas in Northeastern Nevada", an unpublished Master's Thesis by Robert W. Johnson, 1977.

*Totals May Not Add Due to Rounding.

PAA Table 17

Humboldt County
Wildlife Resource Demand Projections

	1977 Harvest		Projected 1990 Harvest		1977 Hunter Days		Projected 1990 Hunter Days	
Species	Humboldt County	Public Land	Humboldt County	Public Land	Humboldt County	Public Land	Humboldt County	Public Land
Mule Deer	423	389	651 1/	599 1/	1,735	1,596	2,672	2,458
Antelope	47	43	72 1/	66/	83	76	128	117
Sage Grouse	1,148	1,068	1,768	1,645	1,064	990	1,639	1,525
Chukar Partridge	11,941	9,553	18,839	14,712	5,800	4,640	8,932	7,146
California Quail	3,178	381	4,894	587	1,036	124	1,595	191
Cottontail Rabbit	3,000	2,100	4,620	3,234	1,675	1,172	2,580	1,805
Dove	2,364	1,655	3,641	2,549	521	365	802	562
Waterfowl	1,533	77	2,361	119	1,193	60	1,837	92
Hungarian Partridge	104	5	160	8	255	13	393	20
Pheasant Cocks	645	6	993	9	588	6	905	9
TOTAL HUNTING	24,383	15,277	37,549	23,528	13,950	9,042	21,483	13,925
Fishing	60,857	27,967	93,720	43,069	18,190	8,360	28,013	12,874
TOTAL	85,240	43,244	131,269	66,597	32,140	17,402	49,496	26,799

Note: 1990 harvest and hunter days based on projected Humboldt county population growth.

1/ Mule deer and antelope harvest are restricted by a quota system, therefore, harvest will probably not increase by the 54% projection and may even decrease from 1977 levels depending on antelope and deer populations.

B. Additional Analysis

Income-Employment Measures

Estimates of the income and employment derived from the consumptive demand for wildlife within Humboldt County are presented in PAA Table 16. Expenditure figures are based on data accumulated in a study done by Garrett of the University of Nevada, Reno in 1969. This study applied to big game hunting in Nevada but due to the relatively small differences in hunter day expenditures among various other game species found in another study (Oliver 1977) it was felt that the figures derived by Garrett would approximate hunter day expenditures for all game species. Income is estimated by multiplying expenditures by 0.26, the estimate of personal income derived per dollar of expenditure (from a study done in Elko County [1/]). Employment is determined by dividing income by the average income in the trade and service sectors of the Humboldt County economy ($9,921).

The contribution of public land to the income and employment of the county is $78,744 and 8 persons, respectively. Both figures account for less than one percent of the total county income and employment. Population dependence on the nonconsumptive use of wildlife resources on public land is 30 persons, less than one percent of total county.

C. Demand Projections

The demand for wildlife resources is affected by the population. Demand projections will be tied to Humboldt County population forecasts. The county population is expected to increase 54% from the 1977 level of 7,573 persons to the projected 1990 population of 11,680 persons. It should be noted that although hunter demand will increase, hunter pressure on all species except chukar partridge and cottontail rabbit has already reached the maximum potential that the species can support. At present, demand for antelope and mule deer is artificially restricted by the quota system, consequently an increase in future demand need not result in an increase in future harvest levels. Figures for projected harvests and user days are presented in PAA Table 17. These figures are based on a 54% increase in county population but need not reflect actual increases in harvest and/or hunter days because of existing quota systems, and regulations which may or may not be imposed in the future.

[1/] Malone and Detering, An Interindustry Analysis of the Elko County Nevada, 1969.

Bighorn sheep may be reintroduced into the Jackson Mountains by the Nevada Department of Wildlife in the near future. No projection for hunter days or harvest are made because hunting will not be permitted until a sufficient population to support an annual harvest has developed. Bighorn sheep do, however, have the potential of adding to the wildlife resource demand in the period beyond 1990 (the limit of the current planning period).

The following graphs, from Water for Nevada, Volume 6, Nevada State Engineers Office 1970, reflect statewide fish and game data projections.

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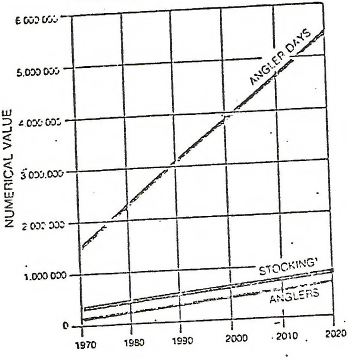
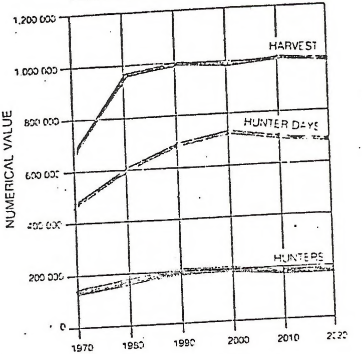
GRAPH 3
ALL FISH DATA PROJECTIONS
RESIDENT AND NONRESIDENT ANGLERS ANGLER DAYS AND STOCKING STATEWIDE, 1970-2020

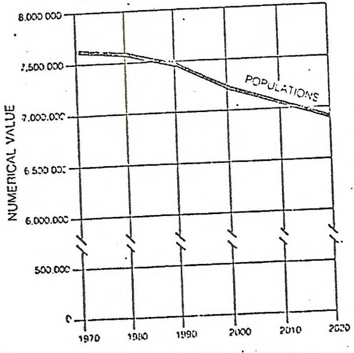


¹POUNDS

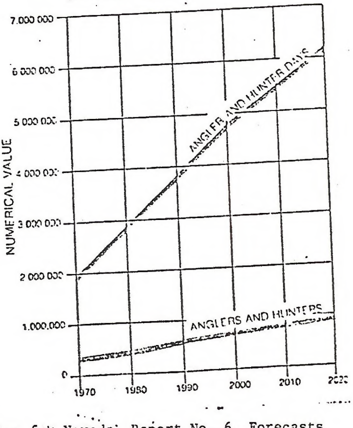
GRAPH 4
ALL GAME DATA PROJECTIONS
RESIDENT AND NONRESIDENT HUNTERS, HUNTER DAYS AND HARVEST, STATEWIDE 1970-2020



GRAPH 5
ALL GAME DATA PROJECTIONS
POPULATIONS, STATEWIDE, 1970-2020



GRAPH 6
ALL FISH AND GAME DATA PROJECTIONS
RESIDENT AND NONRESIDENT ANGLERS AND HUNTERS ANGLER AND HUNTER DAYS STATEWIDE 1970-2020



Nevada State Engineers Office, Water for Nevada, Report No. 6, Forecasts For the Future - Fish and Wildlife, 1973

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D. Wildlife - Public Attitudes and Social Values

As little consideration has been given to fisheries and wildlife habitat management until recently, very few projects have been undertaken to date and the results of these are indefinite as yet. Consequently, there has not been a great deal of public reaction concerning these two programs. However, hunting and fishing are popular sports in the planning area and actions which augment wildlife and fisheries populations are, for the most part, viewed favorably. Concern has been voiced about the poor condition of the streams. Better fishing opportunities and increased hunting quotas would be welcomed by most local residents.

Some resentment has been expressed locally toward out-of-state hunters. It is axiomatic that if the wildlife population increases, more hunters will come in from out-of-state. However, only about 10% of the tags distributed by the State Board of Wildlife Commissioners go to out-of-state hunters. Although out-of-state quotas would increase, in-state quotas would increase substantially more, thus outweighing, for most people, the disadvantages of additional out-of-state hunters. Also, local businesses would benefit from more visiting hunters.

Those persons interviewed generally perceived fisheries and wildlife habitat management to be necessary programs which have had positive results in those areas where they have been put into effect. However, some concern was expressed regarding the management tools utilized. Examples were given of fencing interfering with the movement of wildlife and also of higher elevation areas having been made accessible to hunters as a result of building roads to facilitate fencemaking. (According to the District Wildlife Biologist, all fences currently constructed by the BLM meet standards which allow free movement of wildlife populations.) Ranchers felt that total removal of cattle from areas for the benefit of wildlife habitat was unnecessary. Their opinion is that range improvements will generally improve the wildlife habitat as well, and that cattle should be used as a management tool. One rancher expressed the opinion that the fencing of streams is "expensive, foolish, and unesthetic, compared to a good management plan".

Wildlife and fishery managers generally favor control of grazing as a wildlife habitat tool. According to the District Fisheries Biologist, cattle and fisheries habitat are mutually exclusive and there has never yet been a grazing management plan developed which has proven to enhance and maintain fisheries habitat. In specific situations, according to the District Wildlife Biologist, properly controlled cattle can be used as a management tool. When handled in a proper manner, range improvements can also benefit the wildlife habitat, although in the past detrimental effects have resulted.

The State Department of Wildlife has expressed concern in the past over the fact that they manage the species while BLM manages the habitat. The Department of Wildlife would like to have more say in habitat management decisions. However, there has been a great deal more cooperation between the two agencies in recent times, and relations are seen to be steadily improving.

RECREATION

A. Analysis

1. Hunting

Hunting in Humboldt County is typical of hunting in northern Nevada. Primary target species include mule deer, pronghorn antelope, chukar partridge, and sage grouse. Other species hunted include the following: waterfowl, gray partridge, rabbits, coyotes, and bobcats. Hunter pressure on the primary target species is chiefly from hunters resident in Nevada but with a large percentage from outside the local area. Most of the hunting of the other species is done by residents of the local area. Hunting is one of the major recreation activities in the resource area. Visitor use data for hunting from the Nevada Department of Wildlife appears in PAA Table 18.

2. Fishing

The resource area receives considerable fishing pressure, most of which comes from local residents. Only 46% of the fishing in the resource area can be attributed to public lands while the remaining 54% is on Forest Service or private land. Nearly all of the fishing in the resource area is dependent on stocked fish; native game species are almost nonexistent. Fishing is one of the area's major recreation activities. Visitor use data from the Nevada Department of Wildlife appears on PAA Table 18.

3. General Visitor Use

a. Winter Sports

Little potential for winter sports exists within the county because of short, unpredictable snow seasons, difficult access to snow areas, distances of areas from population, and the unsuitability of the terrain for most winter sports. While a couple of areas may offer a little potential for winter sports, the proximity of the high quality winter sports opportunities in the Sierra Nevada Mountains makes that area more desirable than any location in the county.

Estimates of use by Bureau personnel and local residents indicate that there is little use of public lands for winter sports. See PAA Table 18 for quantified visitor use estimates.

b. Water Sports

The lack of any truly suitable bodies of water limits participation in water sports within the county. Some swimming takes place in hot springs and lakes but it is not a major activity. While a little boating does occur, it is usually in conjunction with fishing. No statistically reliable visitor use data is available. See PAA Table 18 for a quantified visitor use estimate.

c. Collecting

While two types of collecting predominate, a third type (vegetative) is believed to also take place. No statistically reliable visitor use data is available; however, through interviews with local "rock hounds" and observation of use by Bureau personnel, it is believed that the visitor use data presented in PAA Table 18 for rock and minerals collecting is credible.

(1) Vegetative Collecting - No specific areas for this activity have been identified in the county. Most of the use on public land for vegetative collecting is usually incidental to other activities. Occasional field trips are sponsored by native plant and botanical societies, but no hard data is available on this use. See Table 18 for rough estimates of visitor use.

(2) Rock and Mineral Collecting - Twenty localities have been identified in the resource area as being frequently used for the collecting of rocks and minerals. (See Paradise and Denio's URA Step 3; codes Crm 801 to 807 and Crm 601 to 613 for specific location.) This is a popular activity in the resource area with at least a few people participating throughout the year; most of the collecting activity, however, takes place in the spring and fall.

(3) Historic and Primitive Artifact Collecting - This activity is popular in the area and is enjoyed by both residents and nonresidents. Artifact collecting conflicts with historic and scientific goals and is illegal. Since this activity is illegal, no use information is available.

d. Sightseeing

There are over one hundred sites in the resource area that have been identified as having current or potential sightseeing values. These sites encompass historical, archeological, cultural, geological, botanical and zoological sightseeing. Location of individual sites or areas may be obtained from Paradise and Denio URA Step 3 overlays. Estimates of use presented in PAA Table 18 are derived from general sightseeing data in the URAs, and data on driving for pleasure contained in the Nevada Department of Conservation and Natural Resource document, the Statewide Comprehensive Outdoor Recreation Plan (SCORP). It is not possible to reduce the use estimates to the level of individual specific sightseeing opportunities. The data are presented for the category as a whole.

e. Specialized Activities

Two types of activities have been identified in the area: off-road vehicle use and hang gliding. Participation in these activities within the planning area is usually undertaken on an individual or small group basis. There have been a few scheduled events (dune buggy and motorcycles) and the possibility of motorcycle events in the future does exist.

(1) Off-Road Vehicles (General Four-Wheel Drive - 4-WD) - This use is defined in the URA Step 3 as use which is confined to established trails. Most of this type of use is associated with other activities such as rock collecting, hunting, and sightseeing. Estimates of the amount of general 4-WD activity in the planning area are included in the estimates of use for the specific activity with which it is associated.

(2) Off-Road Vehicles (Specialized: Dune Buggies, Cycles, Snowmobiles) - Fifteen areas, with various degrees of potential, have been identified in the planning area as practical for use by the various types of specialized off-road vehicles. This is a popular activity in the area and although participation would normally be expected to increase, predicting is difficult because of doubts about the availability of gasoline. No statistically reliable visitor use data is available. See PAA Table 18 for quantified visitor use estimate.

3) Hang Gliding - One site in the resource area, Winnemucca Mountain, is being used for hang gliding at this time. As the sport grows, other sites will probably be discovered that will offer quality hang gliding experience. Regional meets have been held on Winnemucca Mountain and attempts have been made to have the national meet there. No visitor use information is available.

f. General Pleasure

1) Camping - There are two forms of camping evident in the county. The first is camping that is collateral with some other activity, such as hunting or rock hounding. The second is camping that is undertaken when the camping itself is the primary purpose of the trip. Most of the camping in the county falls in the former category. Economic analysis and visitor use information for camping (PAA Table 18) includes only that portion of the camping in which the camping is the primary activity during the outing. Economic data and use information for camping which is collateral or subordinate to the primary purpose of the outing is included in the data for the primary activity. No developed camping areas presently exist on public lands within the resource area. No statistically reliable use information is available. See PAA Table 18 for quantified visitor use estimates.

2) Picnicking - Picnicking activities are closely associated with other activities and there it may be expected that picnicking would be complimentary to the primary purpose of the trip. No developed picnic sites exist on public lands within the resource area. No use estimates are available because of the difficulty of separating picnicking from other activities.

B. Additional Analysis

1. Estimates of the income and employment generated by the recreation industry and the population effect are shown in PAA Table 19. Notes included with PAA Table 19 make it self-explanatory.

PAA TABLE 18

Humboldt County Visitor Use Data 1977

VISITOR DAYS

Activity	Humboldt County Total	Public Land Within Humboldt County 3/
Hunting 1/	13,107	9,083
Fishing 1/	18,190	13,606
Winter Sports 2/	2,918	2,022
Water Sports 2/	437	303
Vegetative Collecting 2/	37	26
Rock Collecting 2/	1,896	1,314
Specific Sightseeing 2/	147,948	102,528
Off-Road Vehicles 2/	292	202
Camping 2/	13,132	9,100
TOTAL	197,957	137,184

1/ Hunting and fishing data from wildlife section of PAA

2/ Data derived by multiplying 1975 figures by percent increase in population. Results will reflect a minimum estimate of visitor days for each activity.

3/ Visitor days estimated by assuming equal pressure throughout the county. Public land is 69.3% of Humboldt County.

2. Economic Demand Projection - There is no information currently available that will allow a quantified estimate of recreation demand in 1990. Use trends are even more difficult to quantify than current use, but it seems reasonable to expect use to increase at or above the rate of population increase. Data from the Nevada State Planning Coordinator's office shows projected population increases of 54 % and 88 % from 1977 to 1990 for Humboldt County and the State of Nevada, respectively.

C. Visual Resource Management

In the PAA, Visual Resource Management has two phases: Visual Sensitivity, and Levels and Visual Zones.

1. Visual Sensitivity

a. Visitor Numbers

The BLM Manual states that areas that receive more than 200 vehicles per day on the average will receive a high rating while those that receive fewer than 20 vehicles a day would be rated low. Data was obtained from the 1977 Annual Traffic Report, State of Nevada.

(1) Denio Planning Unit - Highway 140 receives an average of 130 vehicles per day. This places it into the medium category of vehicle numbers. Part of the southeast section of the planning unit can be seen from Interstate 80, which is out of the unit. The average daily traffic count on the Interstate is 4,500 vehicles daily. This places part of the southeast section in the high category. All other roads in the unit are considered to be low in volume.

(2) Paradise Planning Unit - State Highway 95, north of Winnemucca, receives from 1245 to 1600 vehicles per day. Interstate 80 had a vehicle count between 3,825 and 4,490 vehicles per day. These two roads were placed in the high level.

State Highway 140 receives an average of 200 vehicles a day and can be treated as being either high or medium. Two roads have vehicle counts that would put them into the medium class. They were the Paradise Valley Road with a vehicle count of 160 and the Thacker Pass Road with a vehicle count of 65.

The rest of the planning unit was considered as low.

b. User Expectation

The second aspect of Visual Sensitivity is based on user attitude toward change. Little change toward the value of the visual resource is expressed and the visual values can be transferred to many other similar areas within the region. These two concepts can be found in the often expressed statements, "What will it hurt? We have millions of acres that all look the same." While recreational values present are of moderate significance, only a few demand an undisturbed landscape. For example, although the phrase "off-road vehicle" contains the term "off-road", most of this activity takes place on roads, primitive roads perhaps, but still roads.

(1) Denio Planning Unit - Part of the Pine Forest is rated very high. This is a highly used recreation area and has received much controversy related to management. The southeast corner of the planning unit (that which is in view of I-80) received a medium rating. The rest of the unit received a low rating.

c. Combining Values

The Matrix for Sensitivity Level Determination (BLM Manual 8411) combined the Visitor Numbers and the User Expectations for a sensitivity rating. The Visual Sensitivity Overlay must be consulted for exact locations.

(1) Denio Planning Unit - It was determined that part of the Pine Forest Range and that area that can be seen from Interstate 80 would be rated as high. That area that can be seen from State Highway 140 is rated as medium and the rest of the planning unit is rated as low.

(2) Paradise Planning Unit - The areas along I-80 and U.S. 95 received high ratings. Although, normally medium ratings would have been given, according to the Sensitivity Level Matrix, it was felt that due to the sheer numbers of people who use these roads, more emphasis should be placed upon the quantity of use. The Manual states that any area that receives more than 200 vehicles a day will be rated as high for quantity of use.

Figure 3

8411 - UPLAND VISUAL RESOURCE INVENTORY AND EVALUATION

Matrix for Determining Visual Sensitivity Levels

user attitude	quantity of use	
H	H	HIGH SENSITIVITY
H	M	
M	H	
H	L	
L	H	MEDIUM SENSITIVITY
M	M	
M	L	
L	M	LOW SENSITIVITY
L	L	

Interstate 80 receives an average of 4,000 vehicles per day. This is 20 times the recommended amount. U.S. 95 receives over 1,000 vehicles a day. As a result, areas in view of both highways were rated as high.

Paradise Valley and the Thacker Pass Road received medium use and medium user reaction. As a result they received medium sensitivity ratings.

The area west of the Bloody Run Hills to Desert Valley had exactly 200 vehicles per day average. This is the cutoff between high visitor use and medium visitor use. Since user reaction was considered low, the visual sensitivity could be either medium or low. An arbitrary decision was made to make it medium since it was expected that use would increase. However, since the choice does not affect the final VRM class, the final decision was of no consequence.

The rest of the planning unit received both a low use rating and a low reaction rating. As a result, the sensitivity level was rated low.

2. Visual Zones

For the visual zone classification several items had to be considered. Visual zones were delineated for areas in Class B scenery (see Scenic Quality in RIS) that had a high or medium sensitivity level. Only the foreground-middleground zone in Class C scenery areas that had a high sensitivity were delineated. Areas in Class C scenery that had medium or low sensitivity and areas of Class A scenic quality do not require visual zone delineation (BLM Manual 8311).

(1) Denio Planning Unit - As a result of the site observations and the previously mentioned limitations, it was discovered that no foreground-middleground designations could be made. Part of the Eugene Mountains, the Trout Creek Spur of the Jackson Mountains, the Pine Forest Range and the Bilk Creek Mountains were rated as background. Parts of the Pueblo

Mountains and the Pine Forest Range are classified as seldom seen. Seldom seen areas are those areas that are not identified and are delineated as foreground-middleground or background. For the exact locations of all visual zones, the VRM overlays must be consulted.

(2) Paradise Planning Unit - The areas adjoining U.S. 95 and Interstate 80 have a foreground-middleground delineation. Part of Paradise Valley adjoining State Highway 8B was also considered to be such. Background areas were located around Jordan Meadows Creek, the west slope of the Santa Rosa Mountains, part of the Quinn River, part of Paradise Valley, Bloody Run Creek, the south end of the Santa Rosa Mountains and north of the Humboldt River in the southeast corner of the planning unit. An area northeast of the town of Paradise Valley was considered to be seldom seen. Seldom seen areas are those areas that are not identified and delineated as foreground-middleground or background.

3. Compilation

The Scenic Quality from URA, Step 3 and the Visual Sensitivity and Visual Zones from this document were inserted in the Matrix for Determining Visual Resource Management Classes. The results were listed in the Recreation MFP, Objective 4, Recommendation 1. The compilation can be seen on a VRM overlay.

Figure 4

8411 - UPLAND VISUAL RESOURCE INVENTORY AND EVALUATION

Matrix For Determining Visual Resource Management Classes

		[2]VISUAL SENSITIVITY						
		high			medium			low
special areas		I	I	I	I	I	I	I[4]
[1]SCENIC QUALITY	A	II	II	II	II	II	II	II
	B	II	III	III[5] IV	III	IV	IV	IV
	C	III	IV	IV	IV	IV	IV	IV
[3]DISTANCE ZONES		fg-mg	bg	ss	fg-mg	bg	ss	ss

1 SCENIC QUALITY..........................A, B, C
8411

2 VISUAL SENSITIVITY LEVEL................high, medium, low
8411

3 DISTANCE ZONES..........................fg-mg - foreground-middleground
8411 bg - background
ss - seldom-seen

4 MANAGEMENT CLASSES......................I, II, III, IV
8411

5 If the area being evaluated is adjacent to any VRM class III or higher, select class III; if lower, select VRM class IV.

NOTES: Class I applies only to classified special areas, e.g., Wilderness, Natural Areas, etc. This quality standard is established through legislation or policy.

Class V applies to areas identified in the scenic quality inventory where the quality class has been reduced because of unacceptable cultural modifications or areas that have the potential for enhancement.

Future and potential Class A areas or sites (identified in Recreation Information System) will be analyzed in Recreation URA 3 and 4. Recommendations for MFP 1 (Recreation) should specify VRM Class I, II, III to ensure future site or area protection.

PAA Table 19

ECONOMIC SIGNIFICANCE OF RECREATION ACTIVITIES - HUMBOLDT COUNTY

Recreation Activity	Visitor Days 1/	Expenditure/ Visitor Day 2/	Direct Income3/	Total Income 4/	% of County Income 5/	Employment6/	% of Activity on Public Land 7/	Total Income Derived from Public Land 8/	% of County Income 9/	Population Dependence 10/	Public Land Population Dependence 11/
Hunting	13,107	30.71	104,654	121,399	.32	12	68.9	83,644	.22	24	16
Fishing	18,189	30.83	145,807	169,136	.45	17	47	79,494	.21	33	16
General Visitor Use											
Winter Sports	2,918	11.00	21,409	23,550	.06	2	5	1,178	<.01	4	0
Water Sports	437	10.00	2,915	3,206	<.01	0	10	321	<.01	0	0
Collecting	1,933	6.00	7,735	8,509	.02	1	90	7,658	.02	2	2
Sight-seeing	147,948	6.00	592,088	651,297	1.74	66	75	488,473	1.31	130	98
Off-road vehicles	292	35.00	6,817	7,498	.02	1	60	4,499	.01	2	1
General Pleasure	13,132	10.00	87,590	96,349	.26	10	20	19,270	.05	20	4
TOTALS	197,957	18.83	969,015	1,080,944	2.89	109	63.3	684,537	1.83	215	136

1/ Visitor days for hunting and fishing from wildlife section. Visitor days for general visitor use derived from 1976 PAA data multiplied by percentage increase in population. Results indicate a minimum estimate of actual visitor days.

2/ Expenditures for fishing and hunting are averages calculated from the wildlife section. General visitor use expenditures are from various sources listed in the 1976 PAA, including USFS, BOR, University of Nevada, University of Wyoming.

3/ Direct income = Expenditure pervisitor day x visitor days x direct income multiplier. Direct income multiplier = .26 for hunting and fishing; .667 for General Visitor Use.

4/ Total income = Direct income x sector multiplier. Sector multiplier = 1.16 for hunting and fishing (SED system) and 1.10 for general visitor use sectors (SEP).
5/ % of county income - percent sector income is to total county income. Total county income = $37,379,000.
6/ Employment - total income divided by average income in the trade and sevice sectors ($9,921).
7/ % of activity on public lands based on BLM estimates.
8/ Total income derived from public land - % of activity on public land x total income.
9/ % of county income = total income derived from public land divided by total county income.
10/ Population dependence = 1.97 (population/employed person ratio) x employment.
11/ Public land population dependence = % of activity on public land x employment x 1.97.

D. Recreation-Public Attitudes and Social Values

The main controversial issue relating to recreation is the closure of Blue Lake. County officials would like to see access to the lake reopened and they would prefer that the area become a county park. The County Commissioners have filed a lawsuit against the BLM challenging the legality of this closure. Although local residents have voiced considerable opposition to the closure, the majority of campers interviewed in the Blue Lake vicinity expressed favorable attitudes toward the closure. Persons interviewed during the preparation of this document were divided in their opinions on this issue. Those opposed felt that the action was unfair to elderly and those persons in poor physical condition. Several people who expressed negative views had never visited Blue Lake. Those in favor considered the action necessary in order to preserve the area's pristine beauty. The latter set of interviewees felt that the county would not manage the Blue Lake area adequately, based on their past record of park management. Even if they did not agree with the closure, most people did seem to feel that some sort of protection was needed for the area to prevent it from becoming ruined. Some individuals maintained that the road into Blue Lake should never have been built in the first place. Poor planning was blamed for present problems.

Other attitudes held by groups which relate to recreational uses of the public lands are as follows:

1. Rock collectors feel that no area should be closed to off-road vehicles and that no restrictions should be placed on gem and mineral specimen collection.

2. Hunters think that there is not enough game and no areas should be closed to ORVs.

3. Fishermen have expressed a desire for more stocked reservoirs closer to Winnemucca.

E. Cultural Resources - Public Attitudes and Social Values

Many residents of the planning area, as well as outsiders, believe that collection of historic and prehistoric artifacts, particularly arrowheads, is a legitimate use of the public lands. These people consider it to be a form of recreation, a treasure hunt of sorts. They cannot conceive that arrowheads and other artifacts have any significance beyond the esthetic value of how attractive they will look mounted on their living room wall. Persons interviewed expressed the opinion that much of the time and money invested in archeological studies was a waste--another case of preservationalists having more say over the use of the public lands than local people.

On the other hand most people seem to feel that rockshelters and petroglyphs, as well as historic structures in gold mining towns, do warrant preservative and protective measures. Their more sympathetic feelings toward these is probably based on the more striking appearance of these prehistoric and historic sites. However, a need for more public education efforts is also indicated by these attitudes. One person who could see no real value in arrowheads said that rockshelters and petroglyphs should be preserved because they were time indicators. This is exactly what projectile points (arrowheads) represent to the archeologist.

Both the Chamber of Commerce and the editor of the Humboldt Sun felt that there was historical interest in the community, but believed that signing or publication of literature concerning specific historic or prehistoric sites would endanger these resources by drawing attention to them. The editor felt that general background articles on the history and prehistory of the area, and ethnic groups--particularly the Chinese--would be enjoyed by the populace and the newspaper would be willing to print those.

The Humboldt County Museum expressed appreciation toward Bureau cultural resource personnel who have provided assistance in terms of identification of artifacts and donation of documentary photographs and reports. They favor interpretive signing of old mining towns and archeological sites and other interpetive efforts, such as signing, informative literature, and displays, though they themselves have no funding available. They have a quarterly publication and they are eager to have contributions to it from the District BLM archeologists. Four-wheel drive access was not favored where historic and prehistoric resources might be threatened.

The Humboldt County library would appreciate contributions of BLM reports dealing with the history and prehistory of the region.

WILDERNESS

The wilderness program was created with the passage of the Wilderness Act of 1964. This Act directed the Forest Service, Fish and Wildlife Service, and the Park Service to conduct wilderness inventory on the lands they administer. The Act further stated what the criteria was for wilderness. That criteria was and is still today: 5,000 roadless acres, unless the area is an island or has some outstanding characteristics which justifies its preservation and designation; the area is to be natural and pristine in nature with the imprint of man substantially unnoticeable, a place where man is a visitor but does not stay; and lastly, the area should have outstanding oportunities for solitude and/or primitive recreational opportunities. The above-mentioned agencies identified millions of acres that met these qualifications and now approximately 19 million acres are within the National Wilderness Preservation System.

Under the Wilderness Act of 1964, the BLM was not required to conduct wilderness inventory until the passage of the Federal Land Policy and Management Act of 1976. This law instructed the Bureau to conduct wilderness inventory on the 450 million acres of public land under their administration and to have it completed by 1991.

There has never been in the history of the BLM such a massive inventory in the time period allotted. The date 1991 is very misleading because the inventory study will be completed by 1980 or 1981, but Congress has until 1991 to make their decision for designation or elimination.

The inventory is divided into three stages: Initial, Intensive, and Wilderness Study Area. The State of Nevada is presently in the Initial Inventory Phase which requires the identification of inventory units, assigning numbers to inventory units, and eliminating those areas that obviously lack wilderness characteristics. This phase of the inventory furthermore requires that the public be kept well informed on what is happening. The Winnemucca BLM office has conducted three public meetings in Winnemucca and one in Ft. McDermitt. Mr. Jim Cameron, District Wilderness Coordinator, has also spoken to the County Commissioners of Humboldt County on three separate occasions. The object of the meetings was to inform the general public of the status of the program and to encourage their comments on wilderness inventory review procedures. The first wilderness meeting discussed the draft wilderness review procedures. The second meeting discussed the draft interim procedures which explained the types of activities that would be permitted within wilderness areas and proposed wilderness areas. The third meeting was used for the purpose of displaying the initial inventory maps which show boundaries and the different designations of each unit in the District.

All four meetings were attended by a varied population of user groups. The groups represented included mining, grazing, ORV, trappers, and wilderness advocates. The largest percentage of the people were from mining, with ranching second, and ORV, trapping, and wilderness advocates, respectively. From the meeting there was much concern from the general public. The people expressed considerable concern that the federal government was going to make everything wilderness and force everyone out of business. It is very obvious from the meetings that there is little trust in the federal government. The inventory procedures require a step-by-step process eliminating areas along the way until the final areas are identified. From the verbal comments received from the meetings and the written comments received from the comment period, the idea of the general public is to eliminate as many areas now rather than waiting later when they feel it may be more difficult.

To summarize the general public meetings, it is safe to say that 95% of the people attending were against any type of wilderness designation in Humboldt County.

The ranchers felt sure that their cattle allotments would be affected. They furthermore related that large numbers of people would scare their cattle off the tops of the mountains during the summer.

The ORV groups felt that they should have the right to use existing roads and ways and go cross-country if so necessary to reach their destination. They further related that the majority of the hunters and sportsmen use their 4-wheel drive rigs in this manner.

The miners felt that the BLM was trying to place restraints on the mining law of 1872. They feel it is their God-given right to prospect and explore for minerals on all public land. They further related that wilderness would lock up some of our nation's most valuable mineral resources from exploration. The prospectors deplore the idea of having to request permission from anyone, especially the Bureau, before they can make a road or do any surface disturbance. In the opinion of the mining industry, many of the areas recommended for intensive wilderness study obviously lack wilderness characteristics. This dilemma of what is obvious and what is not has caused serious problems and much confusion throughout the general public and the Bureau.

Two wilderness advocates attended the public meetings in Winnemucca. They were in favor of the Blue Lakes exclosure and further study for the area. Very few written comments were received from wilderness advocates. One letter was received from the wilderness organizations throughout the state concurring with the initial inventory findings, with the exception of Unit NV-020-822 (Snowstorms).

The trapping industry is well represented in the Paradise-Denio Planning Area. The trappers voiced their concern that if areas became wilderness it would greatly limit access to their traps. Presently they use existing roads and ways, but often drive cross-country to check and set traps.

No precise calculations have been made on the number of public comments received during the 90-day public comment period for the initial inventory, but it is safe to say that 90% were not in favor of wilderness (Jim Cameron, District Wilderness Coordinator, August 1979).

Interviews with local residents, during the preparation of the PAA indicated the following additional prevailing concerns and attitudes:

1. Access should not be closed off to wilderness areas because the number and types of people who would be able to use them would be limited to a certain age group and state of health. Citizens of McDermitt feel particularly stongly about this point. McDermitt itself does not hold many recreational opportunities so they consider the public lands to be their playground. They feel that wilderness designations would entail cutting off access to hunting, fishing and camping in these areas.

2. There is a need for some wilderness as it is the naturalness of this area which makes it attractive. However, the BLM is asking for more wilderness areas than are necessary. The establishment of wilderness areas should not jeopardize the local economy.

3. Existing laws and management are adequate to protect these areas. Money should be spent on determining better ways to manage these areas and on personnel to enforce existing laws and policies rather than on wilderness studies.

4. Rather than locking up vast areas of public lands for wilderness, it should be preserved for multiple use (State Multiple Use Advisory Committee on Federal Lands).

5. Miners expressed concern over air quality standards associated with wilderness areas which might affect mining operations in close proximity to these areas (Peggy McGuckian, PAA interviews, August 1979).

INFRASTRUCTURE AND BUREAU RELATIONSHIPS

TAX BASE AND PUBLIC FINANCE CAPABILITY

The tax base for Humboldt county is the assessed valuation of the real property within the boundaries of the taxing unit. PAA Table 20 shows the assessed value of the local government tax bases between 1970 and 1979. The local government unit rate is the mill levy on a dollar of real property or the amount of tax in cents to be paid on a hundred dollars of property. The Nevada State property tax is .25 mills. The total combined tax rate is limited by the state constitution to 5.00 mills. For 1979-1980 the Nevada State legislature placed a new limit on the combined tax rate of 3.64 mills, and the possibility of a proposition 13-type vote does exist for the future. The combined unit rate is computed by adding state and local taxes together. The combined rate in 1978-79 for Winnemucca was 4.88 mills. The state government also collects a gasoline tax, cigarette, and sales tax, and a gaming tax on gambling. Most of the revenue that goes to the state government goes into the general fund, of which part is divided and returned to the counties as distributive school funds. This method is used because the counties lack the ability to adminster these taxes.

The tax base and tax rate are both sufficiently high and stable to enable absorption of population changes in Winnemucca. However, in the smaller outlying communities, the tax base is narrow and the tax rate is lower than in the large towns. Therefore, these small communities are ill-equipped to expand their social services in order to deal with the rapid change in population that could result from a mining boom or a major construction project.

PAA Table 21 illustrates the transfer payments from federal and state governments to the county. The largest category in federal grants comes from the U. S. Department of Interior, followed by the Office of Revenue Sharing. Fiscal assistance to state and local governments is a second significant source of transfer payments. Humboldt County is heavily dependent on Nevada State school fund distribution and gasoline tax revenue distribution.

At present some debts have been incurred for the local high school and hospital; however, uncommitted bonding capacity remains high in relation to total assessed valuation.

PAA Table 20
HUMBOLDT COUNTY
LOCAL GOVERNMENT TAXING UNITS ASSESSED VALUATION
1970 - 1979
ASSESSED VALUATION (DOLLARS)

Local Government Taxing Unit	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	Local Gov't Unit Rate
Humboldt County	33,672,860	35,401,205	34,576,779	39,261,126	44,305,889	51,080,492	58,141,753	61,612,991	71,461,729	80,592,261	1.1005
Golconda Fire Protection Dist.	5,000,174	5,014,732	4,273,744	5,429,525	5,784,478	7,112,855	6,554,053	6,969,378	7,869,150	11,750,816	.1500
Humboldt Fire Protection Dist.	N/A	N/A	N/A	272,537	289,127	319,980	300,935	342,866	443,774	503,743	.1500
McDermitt Fire Protection Dist.	1,771,416	1,768,229	885,461	975,477	959,105	1,328,714	3,067,087	3,104,456	4,785,598	4,421,692	.2500
Orovada Fire Protection Dist.	1,909,237	1,969,040	2,067,288	2,288,734	2,500,604	3,335,773	3,546,208	3,747,430	3,988,097	4,750,856	.1500
Paradise Valley Fire Prot. Dist.	2,018,751	2,083,911	2,211,028	2,568,980	2,674,173	5,356,053	5,635,868	5,367,797	4,950,724	4,999,928	.1500
Pueblo Fire Protection Dist.	605,616	635,712	731,401	807,106	851,532	1,526,789	1,578,683	1,580,820	807,106	1,711,350	.2000
Winnemucca Rural Fire Prot. Dist.	3,129,990	3,188,285	3,435,116	5,300,137	5,297,943	7,445,713	9,158,833	9,922,083	5,300,137	13,736,764	.2500
Winnemucca	9,270,191	9,774,911	10,041,032	11,349,340	12,166,588	13,333,497	14,392,028	15,141,611	11,349,340	20,514,847	1.7500
Humboldt County Schools	33,672,860	35,401,205	34,576,779	39,261,126	44,305,889	51,080,492	58,141,753	61,612,991	39,261,126	80,592,261	.7195

PAA Table 21

Federal and State Payments to Humboldt County Government Fiscal year 1978-1979 1/

FEDERAL	
Dept. of Interior in Lieu of Taxes	$308,000
Dept. of Agriculture Forest Service Fees	7,000
Office of Revenue Sharing Revenue Sharing	133,872
Abuse Neglect Cours. Grant	9,000
CETA	11,672
Federal TOTAL	$469,544
STATE	
Motor Vehicle Privilege Tax	$ 97,102
Cigarette Tax	63,913
State Liquor Tax	13,092
County/City Relief Tax	112,031
State Gaming License Tax	118,928
Private Car Line Tax	3,287
State TOTAL	$408,353
GRAND TOTAL	$877,897

1/ Humboldt County Amended Final Budget 1979-1980

COMMUNITY FACILITIES

Winnemucca

The City of Winnemucca has a new indoor swimming pool equipped with a sauna, and an outdoor swimming pool. A nine-hole golf course is maintained by the city and special services include a children's golf program. Four lighted tennis courts and two parks with picnic facilities are also located in town. In addition, there are county-owned picnicking facilities in Water Canyon. Nixon Hall is a renovated opera house which has a stage and an auditorium seating approximately 500. This is used for conventions and music and drama performances. The new Fine Arts Gallery, also housed in Nixon Hall, provides local artists with opportunities to display and sell their arts and crafts. Other public facilities in the community include the Humboldt County Library, the Humboldt County Museum, and the Humboldt County Fairgrounds where livestock exhibits for the Tri-County Fair, rodeos, horse shows, and chariot races are held. There are also a movie theater (open four nights a week) and two casinos in Winnemucca.

Most community facilities are considered adequate for present needs and for those accompanying moderate growth. A state imposed cap on spending has created some concern about the financing of facilities such as the new pool. There is also interest in the community in the building of a convention center. It is felt that a convention center has a great deal of potential in Winnemucca and that the additional business brought into the community by it would be beneficial to the local economy. Also, it would provide a sorely needed meeting place for the town. A room in the library used for conferences will probably soon be required for accommodating an increased bilingual collection as well as other new volumes. The present stage in Nixon Hall also has technical faults which detract from the quality of performances and presentations which take place there. Final decisions on location, financing, and facilities to be included have yet to be made. It is unlikely that public land will be utilized for this project, as all presently proposed building sites are on private land.

Although the present golf course is more than adequate for present needs, a new 9-hole golf course is included in the General Plan. There is no immediate demand for a second golf course but when the need arises, public land may be requested for this purpose. Other planned improvements include construction of a fair building and expansion of the museum. Though the museum's existing facilities are too small, presently funding is not available for expansion costs.

(Interviews with Hughie Schoff, City Councilman; Mat Morris, City Planner, July 13, 1979; John Buchan, Winnemucca Chamber of Commerce, July 7, 1979)

Funding has been arranged for the fair building which will include an exhibit hall to be used by the Tri-County Fair and other functions. Currently the National Guard Armory is used for this purpose. Both of these projects will be undertaken on private land.

Winnemucca is incorporated and has a population of 3,587.

Denio

Denio's Community Hall and library recently burned to the ground, and construction of a new community hall/library is scheduled to commence soon. It will include recreation facilities, the library, a kitchen, and a meeting room designed to seat approximately 250 people. There is also a roping arena with water and bathroom facilities. Eventually a park will be developed on this site as well. Public land was obtained for the roping arena. (Interview with William Moser, Denio Community Group member, August 12, 1979.)

Denio is unincorporated and has a population of 20.

Paradise Valley

Paradise Valley has a Community Lodge Hall (Independent Organization of Odd Fellows Lodge) where meetings are held. There is a small park in town with bathrooms, picnicking facilities and there are picnic tables and barbeques at Martin Creek. (Interview with Elizabeth Chabot, Justice of the Peace, August 3, 1979.)

Paradise Valley is unincorporated and has a population of 100.

McDermitt

McDermitt is an unincorporated town in two states (Nevada and Oregon) and in two counties (Humboldt and Malheur). It is, however, a nonprofit corporation which is incorporated in both states. There is a McDermitt Community Board consisting of seven elected members. The McDermitt Water System is the Board's main business. Water users are assessed $1.00 a month. This money is used for the community landfill project, the cemetery and community property care. There is no other source of funds for community projects except money raised through private fund raising benefits and some Humboldt County Fair and Recreation Board money. Lack of money inhibits community development.

McDermitt has a Community Hall and a rest stop area which has no picnicking facilities. There is also a rodeo grounds which was acquired from the Vale District Bureau of Land Management in the past. If McDermitt experiences a large amount of growth, it is possible that public land would be required for a golf course, a trap range or a swimming pool. (Interview with Victor Botts, Community Board Leader, August 1979.)

Fort McDermitt Indian Reservation has a Tribal Administrative Building. The Tribal Council has applied for a governmental block grant to obtain funds to build a recreational center on the reservation. This facility might also include a library.

The town of McDermitt has a population of 200, while the McDermitt Indian Reservation has 500 Paiute and Shoshone residents.

Golconda

Golconda has an old schoolhouse which is utilized as a community hall. The town is unincorporated and has a population of 200.

Orovada

Orovada is unincorporated and has a population of 30. It has a community hall. (Population figures taken from 1970 U. S. Bureau of Census data.)

Other Recreation Areas

Lye Creek Campground is a Forest Service recreation area in the Humboldt National Forest, with camping and picnicking facilities as well as fishing and hunting opportunities. The Hinkey Summit vicinity is also a popular snowmobiling and cross-country skiing area.

Chimney Dam Recreation Area is a Humboldt County development which is not yet completed. Eventually it will have fishing, boating, and camping/picnicking facilities available to the public.

HEALTH SERVICES

The principal medical facility in the area is the Humboldt County General Hospital in Winnemucca. It has a 32-bed capacity. Ten nurses and 52 other persons are employed by the hospital. A doctor is on call 24 hours a day. When built in 1973, the hospital was designed to sustain a 60% to 70% increase in use. Presently, it is operating at approximately 65% of its capacity. The hospital has a lab, an X-ray unit, and licensed volunteer ambulance service. It is equipped to handle most major surgery and cardiac cases, the major exceptions being traumatic orthopedic and open heart surgery cases. Emergency patients that the hospital cannot handle are taken to Reno or Elko. There are six doctors in Winnemucca. Two of these have private practices while the other four are employed by Humboldt Health Care Medical Clinic, a hospital based clinic. A nursing home is also attached to the hopspital.

McDermitt has one resident physician assistant. In additon, a satellite clinic is there once a week. Paradise Valley has no medical service, but does maintain an ambulance. Other outlying communities depend on ambulance service from Winnemucca for emergency medical care. (Interviews with Ed Hansen, Humboldt General Hospital Administrator, and Lloyd Davis, Humboldt Health Care Medical Clinic Administrator, July 16, 1979.)

The Public Health Nurse provides a wide variety of community health services through the Community Health Nursing Program. There is little or no charge for these services due to state and federal funding. Family Planning, Immunization, TB Chest Testing, and other clinics are held in Winnemucca. Clinics are also held occasionally in McDermitt. Patients are referred to clinics in Reno as well. A number of other health services are available on an individual basis. (Interview with Mrs. MacNelly, Public Health Nurse, July 16, 1979.)

Rural clinics provide numerous mental health conseling services, including marriage, family, group, and individual conseling.

Nevada Home Health Services, Inc., is a private nonprofit organization which provides skilled nursing service to shut-ins (Rural County Resources, Cooperative Extension Service, UNR, 1978).

There are three dentists in Winnemucca.

SOCIAL PROGRAMS AND WELFARE

The Nevada State Welfare and Food Stamp Offices in Winnemucca provide Aid to Dependent Children (A.D.C.) and Food Stamp assistance to Humboldt County residents. The Social Security Office in Reno is responsible for distribution of Social Security Income (S.S.I.) benefits, S.S.I. aid includes the Old Age Security (O.A.S.), Blind Assistance (B.A.) and Disability Assistance (D.A.) formerly administered by the state. The State Welfare Office still handles medical assistance payments to S.S.I. recipients as well as to A.D.C. clients.

As of June 30, 1978, there were 81 S.S.I. recipients in Humboldt County. These figures should be updated by about 10% to approximate the current number of beneficiaries. (Telephone conversation with Carl Stelzner, Assistant Manager, Social Security Office, Reno, July 20, 1979.)

There are 103 families receiving Food Stamps and 44 A.D.C. cases in Humboldt County. Fifty O.A.S., 3 B.A. and 18 D.A. cases, as well as all A.D.C. cases, receive medical assistance from the state. These figures are correct as of July 1, 1979. (Interview with Julie West, Social Worker, Nevada State Welfare Office, Winnemucca, July 17, 1979, and telephone conversation with Food Stamp Office, Winnemucca, July 18, 1979.)

The Nevada State Bureau of Vocational Rehabilitation in Winnemucca provides vocational counseling, training and placement aid to persons with physical or mental disabilities. (Rural County Resources, Cooperative Extension Service, Univeristy of Nevada at Reno, May 1978.)

A Senior Citizens Hospitality Center is located at Nixon Hall in Winnemucca. Approximately 100 persons a day are served a midday meal there through a state and federally funded program. Though there is space to accommodate a 45% increase in recipients, presently there is only funding available for 80 persons. Meals are served free of charge to those over 60. Those under this age limit are requested to make a donation if they are able to. Other services for senior citizens include locating housing for those who require it, and referrals to the Public Health Nurse and Mental Health Center. Senior citizens are also provided with opportunities to participate in arts, crafts, and games at the center. Transportation for shopping purposes is available as well. (Interview with Jane Jones, Acting Director, August 8, 1979.)

EDUCATION

Costs of education are approximately $2,075 per student in Humboldt County as opposed to $1,816 per student for the state. Students may be bused across county lines for convenience through a tuition agreement among counties. However, any large population growth will require remodeling and additional teaching equipment. Following is a breakdown of enrollment by school and age.

PAA Table 22

Humboldt County School Age Breakdown
July 1979

School	Location	Grade	Present Enrollment	Maximum Capacity
Albert Lowry High	Winnemucca	9-12	494	585
W. Junior High	Winnemucca	6-8	342	490
Winnemucca Grammar	Winnemucca	1-5	250	480
Sonoma Heights	Winnemucca	K-5	377	425
McDermitt Combined	McDermitt	K-12	230	542
Orovada	Orovada	1-8	46	90
Paradise	Paradise Valley	1-8	13	90
Denio	Denio	1-8	9	60
Kings River	Kings River	1-8	7	60
Leonard Creek	Leonard Creek Ranch	1-8	9	10
Jackson Mountain			4	

"Humboldt County School District Enrollment", 1979 and Winnemucca District SEP p. 67, Interview with Bob Scott, Superintendent of Schools.

The Winnemucca College Center in Winnemucca is an off-campus program of the Northern Nevada Community College. It is part of the Community College Division of the University of Nevada System. All classes are taught at the high school. There are 20 teachers and approximately 300 students. Dropout rate is about 12%. Permanent facilities are needed by the college but no funding is available at this time. Special programs include the Adult Basic Education and English as a Second Language Classes. Community College classes are also taught in McDermitt. (Interview with Lois Craver, Coordinator, 8-16-79.)

LAW ENFORCEMENT

Winnemucca, a town of approximately 5,000 persons is the only town within the county served by a city police force. The city force consists of eleven uniformed officers, including a lieutenant and the police chief. The Winnemucca police will respond to calls for assistance from areas outside the city limits as a courtesy to the county sheriff's department. The county sheriff's department serves the rest of the county. Personnel strength is six officers including an undersheriff and a juvenile officer who is also a deputy sheriff. One deputy is assigned to McDermitt. Patrols do visit the rural areas within the county but only when officers are free from investigative duties. The overall population to law enforcement officer ratio within the county is 473 to 1, based on 1977 population figures. It is anticipated that the growth of Valmy will eventually require the assignment of one deputy to this community.

Search and rescue services in the county are provided by 10 volunteers with five four-wheel drive vehicles and one jeep. All the volunteers are trained in first aid, three are emergency medical trained. To date (August 1979) only two rescue calls have been received in 1979.

TRANSPORTATION AND COMMUNICATION

Roads - A fairly good road system serves the planning area. Winnemucca is on Interstate 80, the main arterial route between Salt Lake City, Utah, and Sacramento, California. Work is currently in progress to bypass the downtown area. State Highway 95 connects Winnemucca with Oregon and Idaho through McDermitt. State Route 140 branches off 95 and runs through Denio and on to Oregon and the coast. State Route 49 is a two-lane, bladed, gravel road which connects Winnemucca with Gerlach. The road system forms a centralized network with Winnemucca as its focal point. The county maintains other paved and gravel roads. BLM also maintains several improved dirt roads which are accessible by four-wheel drive vehicles. See the Visual Resource Management portion of the Recreation Section for the average number of vehicles per day utilizing the main roads in the planning area.

Railroads - Two transcontinental railroads, the Southern Pacific Railroad and the Western Pacific Railroad, parallel each other along the Humboldt River. Freight service as well as passenger service on Amtrak is available in Winnemucca.

Bus Lines - Bus lines operate on the Interstate highway and connect along Highway 95 north and south. Buses leave east and west several times daily on Interstate 80.

Air Lines - There is a municipal airport in Winnemucca. Both planes and helicopters can be chartered or rented from Winnemucca Air Service or Sonoma Flying Service at the airport. No regular commercial flights are presently available, but the development of such a service in the near future is being seriously considered. There are also several small airstrips throughout the planning area which can handle light planes.

Telephones - Telephone service is available to all small towns and most of the ranches in the planning area. There are no areas without some form of contact. Telegraph lines connect all of the small towns.

Television - Television reception is available with high gain antennas throughout the planning area. Two repeater stations near Winnemucca rebroadcast Reno and Boise television stations.

Radio - There is one AM radio station, KWNA, in Winnemucca. FM radio is also available from Reno via translator FM transmitter. Residents in the northern part of the planning area are able to receive several stations originating from California as well.

Civilian band, or CB radios, are becoming popular and are used throughout the district by many private individuals.

Newspapers - The Humboldt Sun is a bi-weekly periodical which covers local area news. The Winni-Mini Mart is a small free weekly publication which is basically for advertising purposes but also contains some local news. Regional papers include the Elko Free Press and Reno's Nevada State Journal.

For further information on transportation and communication, see the BLM's district transportation plan and overlay.

UTILITIES

The planning area is well covered by major utilities. Electric power transmission is available to all small communities and almost all ranches and farms. The few isolated ranches which are without power lines usually generate their own electricity with diesel generators. Additional activity in irrigation and mining would increase demand for electricity.

Community Water Supply And Waste Water Disposal

Denio (unincorporated)

Water supply is provided by individual wells. The construction of additional wells as the need arises will be adequate for meeting domestic water requirements through 1990.

Waste water disposal is provided by septic tank systems. These systems were built thirty to forty years ago and do not function adequately today due to overloading. The town would like to establish community waste water facilities but needs to form an association or sewer district before plans can proceed.

Golconda (unincorporated)

This community is served by two separate water supply systems. One system was constructed by the Southern Pacific Railroad in the 1800s. It provides water from a creek four miles south of town. Creek flow becomes critical to the system during dry summer months. Conveyance facilities are in poor condition and in need of repair. The second system, which is privately owned, supplies water from a well.

Waste water disposal is provided by individual septic tank systems. High density housing has resulted in inadequate disposal areas for leach lines.

The community needs to combine its water supply systems and expand its services to nearby homes which are currently served by individual wells. A community waste water system will be required before 1990 due to the high density housing development.

McDermitt (unincorporated)

A community water system, which supplies water from a single well, was built in 1966. A second well with a capacity of 750 gpm is currently under consideration for development as an additional water source. The water supply system is operated out of a community fund. The system is considered adequate for meeting domestic and fire protection needs through 1990.

Waste water facilities are provided by the McDermitt Sewer District. The District owns and operates a three-acre oxidation pond, which recently replaced an overloaded system that was a source of odor complaints.

Orovada (unincorporated)

Water supply is provided by individual wells. New wells constructed as the need arises will provide adequate domestic water through 1990.

Waste water is disposed of via individual septic tank systems. The community has just formed a waste and sewer district and is in the process of letting bids for construction of a waste water disposal system.

Paradise Valley (unincorporated)

Water is supplied by individual wells. Some contamination of the groundwater has occurred from septic tanks. However, the recent formation of a community sewer district and construction of sewage oxidation ponds should halt further contamination. Attempts are currently being made to form a water district in order to ensure a potable supply of water.

Waste disposal systems are adequate through 1990.

Winnemucca

The city's water supply system is owned and operated by the California-Pacific Utilities Company. Water is supplied from both surface and underground sources. All sources are capable of supplying a combined flow of approximately 7,045 gpm. Additional storage capacity will be needed between 1980 and 1990. The Humboldt County draft general plan estimates that output of the system could be increased five-fold with the addition of a new well and construction of two additional reservoirs.

Waste water facilities are owned and operated by the city. A new treatment plant was constructed in 1967. Treatment is provided by two aeration ponds followed by two stabilization ponds. The plant is currently running at one-half capacity.

FIRE CONTROL

1. Fire Control Organizations and Equipment

There are eight fire control organizations within the Paradise-Denio Resource Area: Bureau of Land Management, U.S. Forest Service, Fort McDermitt Tribal Council, McDermitt Rural Fire District, Orovada Rural Fire District, Paradise Valley Volunteer Fire Department, Winnemucca Rural Fire District, and Winnemucca Volunteer Fire Department.

A. The Bureau of Land Management is the largest organization. The Winnemucca District has a fire management organization that consists of a maximum of twenty-four persons and seven pieces of equipment (see Table I). The Vale, Oregon, District of BLM provides initial fire attack in the McDermitt-Kings River Valley area.

Besides wildland fire suppression, fire personnel perform work that is either natural resource related or is directly beneficial to district operation. Examples are installation and maintenance of water projects and fence construction and maintenance.

The district is planning to construct a fire substation near Orovada. This installation would provide improved wildland fire control in the northern portion of the resource area. Two fire trucks and crews would be stationed here during the fire season.

B. The U.S. Forest Service has a small crew and equipment stationed at the Paradise Valley Ranger Station, Santa Rosa District of Humboldt National Forest.

The Winnemucca District and the Santa Rosa District share initial attack on 576,00 acres of lands.

C. The Bureau of Indian Affairs, through the Fort McDermitt Tribal Council, has a crew and one fire truck stationed at Fort McDermitt. This crew provides wildland fire suppression on all lands within the reservation.

D. The McDermitt Rural Fire District provides fire protection services in the McDermitt area. No information is available on personnel and equipment.

E. The Orovada Rural Fire District has twelve volunteer firemen and three pieces of equipment available for wildland fire control.

The U.S. Forest Service maintains a ten-man tool cache in Orovada.

F. The Paradise Valley Volunteer Fire Department operates three fire trucks and an ambulance. There are twenty firemen in the department.

G. The Winnemucca Rural Fire District consists of ten firemen and four pieces of equipment. This district provides fire protection for 25,600 acres of land lying within the Paradise-Denio Resource Area.

The fire district maintains an annual operating plan with BLM and a mutual aid agreement with the Winnemucca Volunteer Fire Department.

H. The Winnemucca Volunteer Fire Department operates two Class A structural fire trucks. The department has twenty members.

As the city of Winnemucca grows and as the fire protection needs increase, the Voluntter Fire Department will increase in both amount and type of equipment and number of personnel.

The city lies wholely within the Rural Fire District. It is not known how the growth of the city will effect the operation of the fire district.

The Bureau will continue to respond to wildland fires on public lands even though the city may expand into the Rural Fire District.

Specialized equipment, such as air tankers and helicopters, are available from other BLM Districts within the state.

The fire control forces available locally and through cooperative agreements are capable of controlling all expected fires occurring during a normal fire year. Additional forces, if the need arises, are available through the Nevada State Office.

Cooperative agreements and annual operating plans are a necessary part of the overall fire organization. Normally, the agreements are "nonexpiring" or are of the "indefinite extension" type. The agreements are reviewed, normally on an annual basis, and revised by the agreeing parties prior to start of the fire season.

The agreements that effect fire control operations in the Paradise-Denio Resource Area are:

Agreement Number	Parties	Date
	Nevada State Office with:	
	-Phoenix Area Office, Bureau of Indian Affairs	May 6, 1966
22-17	-Bureau of Land Management, Idaho State Office, Utah State Office; and Forest Service, Region IV, Ogden Utah	November 14, 1967
	-Forest Service, Region IV Ogden, Utah, and State of Nevada Division of Forestry	April 3, 1970
	-Bureau of Land Management, California State Office and Forest Service, Region V	June 3, 1978
	Winnemucca District with:	
	-Bureau of Land Management,	
NV-020-17	Battle Mountain District	May 1, 1964
NV-020-18	Carson City District	May 1, 1965
NV-020-19	Susanville District	May 1, 1973
NV-020-21	Elko District	May 1, 1971
NV-020-35	Vale District	February 26, 1979
NV-020-31	-Winnemucca Rural Fire District	January 7, 1978
NV-020-32	-Forest Service, Santa Rosa District, Humboldt National Forest	February 10, 1978

2. Fire History

Tables 24, 25, and 26 are a summary of wildland fires by cause, acres burned, ownerships, and suppression and resource damage costs.

There is no correlation between the number of fires and the acreage burned. There is also no correlation between acreage burned and general weather conditions. For example, fourteen fires were recorded in 1975 and again in 1977. However, the acreage burned in 1975 was 133 times larger than that burned in 1977. The general weather conditons in 1975 were below normal temperatures and above normal precipitation. Both temperatures and precipitation were above normal in 1977.

Lightning is the only fire cause that is not related to the human factor. Refer to the .31A Climate and the .37 Fire sections of the respective Unit Resource Analysis for additional information.

Man-caused fires are concentrated along access routes (highways and railroads) and around developed areas. The Fire overlays for the Paradise and Denio Planning Units (URA III) provide a yearly summary of lightning and man-caused fires.

PAA TABLE 23

BLM FIRE EQUIPMENT AND PERSONNEL

EQUIPMENT			PERSONNEL
Quantity	Type	Size	Assigned Crew Members
1	4x4	2 Passenger	1
1	4x4	Patrol, 100 gallons	1
1	4x2	Engine, 175 gallons	2
1	4x2	Engine, 500 gallons	3
2	4x4	Engine, 560 gallons (Unimogs)	4
1	4x2	Engine, 600 gallons	3
1	6x4	Water Tender, 3000 gallons	1
1	4x2	1/2 ton truck	
1	4x2	1-1/2 ton truck	1

PAA Table 24

Fire Occurrence By Cause

Fire Cause	1974	1975	1976	1977	1978	TOTAL
Lightning	6	7	4	2	1	20
Camp Fire	1					1
Smoking					4	4
Debris Burning	1			2	4	7
Incendiary						0
Equipment Use	2	1	1		4	8
Railroad	12		2	1		15
Children						0
Miscellaneous	27	6	13	9		55
Subtotal	49	14	20	14	13	110
False Alarm	7	3	2	7	4	23
TOTAL	56	17	22	21	17	133

PAA Table 25

Fire Occurrence and Acres Burned

Year	Fire Season	Public Lands		Other Ownership		Totals	
		Fires	Acres	Fires	Acres	Fires	Acres
1974	3/19-10/24	20	13,410	29	14,577	49	27,987
1975	3/16-10/24	6	8,544	8	5,969	14	14,513
1976	3/16-11/26	13	651	7	181	20	832
1977	3/7-11/16	7	74	7	35	14	109
1978	4/29-10/28	8	1,905	5	116	13	2,021
	TOTAL	54	24,584	56	20,878	110	45,462

PAA Table 26

Estimated Fire Costs

	Public Lands			Other Ownership
Year	Suppression Costs*		Resource Damage	Resource Damage
	Fires	False Alarm		
1974	$93,500	$500	$377,700	$379,800
1975	24,200	150	360,800	292,000
1976	13,300	100	10,500	500
1977	3,400	350	700	260
1978	3,700	250	54,400	2,500
	138,100	1,350		
	$139,450		+ 804,100 =	
			$943,550	+ 675,660 =
				$1,619,210

*BLM costs only

BUREAU AGREEMENTS

This section includes a listing of cooperative agreements which presently affect the Winnemucca District. These agreements have been entered into with individuals and agencies at the local, state, and national level. For the details of each of these agreements see the District record on cooperative agreements (1780). For those groups, agencies, or individuals having a significant impact on the District's programs or which are significantly impacted by the District's programs, a short analysis of the cooperative agreement is included. All others are merely listed.

U.S.D.A. Forest Service - Part of the Humboldt National Forest is contained within the Winnemucca District in Humboldt County. BLM and Forest Service grazing programs are coordinated, and grazing areas have been exchanged for better administration. Fire protection roads and water and range developments are covered by formal agreements. Further coordination is necessary to coordinate range and habitat management plans and to share data and information.

U.S.D.A. Soil Conservation Service (SCS) - The SCS provides soils information and coordinates ranch management plans with BLM allotment management plans. It provides guidance to farmers and ranchers for private land which sometimes is associated with public land use. Also, SCS Assists soil conservation districts and othger groups in land use planning. The BLM cooperates, through agreement, with planning and giving technical advice.

U.S. Fish and Wildlife Service - By agreement, this agency performs BLM authorized predator control on public lands. In addition the Fish and Wildlife Services acts as consultant to the BLM in matters concerning fish and wildlife resources and related habitat that may be affected by the geothermal leasing program. The Range Improvement Act of 1978 also mandates that BLM consult with the Fish and Wildlife Service in matters concerning the removal of excess wild horses and burros from public lands.

U.S.D.I. Bureau of Reclamation - Under this agreement the BLM administers grazing on all reclamation lands not within the boundaries of authorized or constructed reclamation projects. The plans and programs of both agencies are to be coordinated to the maximum feasible extent.

U.S.D.I. Heritage Conservation and Recreation Service (National Park Service) -The National Park Service provides information on sites on BLM land which may qualify as natural landmarks, conducts theme studies on these areas, coordinates with BLM on the management of these areas, and with the BLM's approval submits qualified sites to the Secretary of the Interior's Advisory Board on National Parks, Historic Sites, Buildings and Monuments for consideration as national natural landmarks.

[illegible]
[illegible]

Nevada Department of Wildlife - Since wildlife is state property, this agency is responsible for animal management while BLM is responsible for habitat management on public lands. Close coordination is carried on, by agreement, for classification, disposal proposals, access, and range developments concerning fencing, revegetation, and water. Closer cooperation is necessary in order to improve wildlife numbers and habitat.

Nevada Department of Conservation and Natural Resources - This organization includes the State Division of Water Resources, the Division of State Parks, and the State Division of Forestry. These agencies relate to Bureau programs through water use regulations, state recreation planning, public lands classifications, woodland disposals, and cooperation with fire suppression. State control of water indirectly controls BLM private land disposal and BLM water developments and controls. The state forester enforces state laws concerning Christmas trees in cooperation with the Bureau. Also, the state forester provides equipment and personnel for fire suppression. The Bureau cooperates with the State Parks Division with requested disposals and protective classifications.

State of Nevada - Nevada State legislation affecting public lands are (BLM District Office, central files, 1780):

AB 466 - Establishes a state multiple-use advisory board and separates conservation and natural resources divisions.

SCR 35 - Establishes a committee to study federal public land use in order to provide benefits to Nevada citizens.

AB 333 - Requires branding and marking of livestock on open range.

SB 130 - Designates regional planning districts in the state.

404.434 - Establishes framework for cooperative road projects with federal agencies.

Humboldt County - Humboldt County is responsible to its residents and the state for planning and zoning of all lands within the county. Thus, Bureau disposal programs classifications, construction programs, and developments directly affect county governments. Also, county planning and zoning directly affect Bureau operations. Bureau employees generally work with county planning boards and commissioners when planning Bureau programs. See the land use planning and zoning by local government checklist (Table 29).

Many of the agreements listed are outdated. All the agreements should be reviewed and either updated or cancelled. However, as long as they remain in effect all the decisions we make are constrained by them.

Agreements concerning the fire program are discussed in detail in the fire section of this document.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS
BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Humboldt National Forest Santa Rosa District	Annual Operating Plan February 1978	Fire	Initial attack on BLM and FS lands. Air operations. Law enforcement. Dispatching. Detection. Training.	Initial attack on BLM and FS lands. Air operations. Law enforcement. Prevention. Training.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Nevada Fish & Game Commission and University of Nevada	Memorandum of Understanding February 27, 1964 Supplement #1 and #2	Wildlife	1. Cooperate in selecting study areas and in determining studies that will be made and procedures that will be followed. 2. Cooperate in building and maintaining enclosures. 3. Make inspections, collect data, evaluate results. 4. Cooperate in formulating management plans for key wildlife use areas. 5. Provide the experiment station with annual grants to help pay expenses.	NDFG 1. Cooperate in selecting study areas and in determining studies that will be made and procedures that will be followed. 2. Cooperate in building and maintaining enclosures. 3. Make inspections, collect data, evaluate results. 4. Conduct wildlife population studies to determine numbers. 5. Collect game animals. 6. Provide the experiment station with annual grants to help pay expenses. Experiment Station 1. Execution of project work plan. 2. Cooperate in selecting study areas and in determing studies that will be made and procedures that will be followed. 3. Provide necessary personnel and equipment necessary to carry out work plan. 4. Make inspections, collect data, evaluate results.

continued

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
				Experiment Station - Continued 5. Prepare and submit: a. Annual progress report. b. Final report at close of project. c. Other reports as agreed upon.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Paradise Valley Soil Conservation District and Kings River Soil Conservation District	Soil (and water) Conservation District	All	1. The Bureau will provide to the District, upon request, such information as it may have available from surveys, inventories, or other studies which would assist the District in preparing its conservation plans. 2. The Bureau will collaborate with the District in developing, scheduling, and executing a mutually acceptable conservation plan for all lands within the boundaries of the District through the following processes: (a) The Bureau will formulate plans and carry out a program of soil and water conservation including both the application of practice and improved land management on all lands administered by the Bureau. (b) The Bureau will provide the District with an opportunity to review such plans and programs for the purpose of relating them with District wide programs and objectives. (c) The Bureau will review the District's Long Range	1. Consolidate and provide to the Bureau for their information a long range soil and water conservation plan for the District. 2. Annually schedule a Bureau-District coordination meeting prior to finalizing both Bureau and District annual work plans. 3. To provide leadership for developing conservation programs on privately controlled lands by encouraging and assisting landowners and operators to formulate, coordinate, and carry out conservation plans on all private lands within the District as rapidly as available resources, consent of landowners and operators, and other factors permit. 4. To collaborate with the Bureau in developing a mutually acceptable general conservation plan for all lands. When requested by the Bureau and if available to the District, the District will make arrangements for (a) supplying soils

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FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Paradise Valley Soil Conservation District and Kings River Soil Conservation District	Soil (and water) Conservation District	All	Program and Objectives and coordinate Bureau efforts with those of the District to the maximum extent possible in keeping with agency responsibilities, priorities, and limitations. 3. The Bureau agrees to reimburse the District in an amount to be mutually determined and acceptable to both parties for use of District owned or operated equipment, services or materials furnished by the District at the request of the Bureau, which accomplishes work in conformance with jointly approved plans. 4. The Bureau will encourage resource users to cooperate with the District in developing an integrated conservation program for their enterprise regardless of land ownership. That all specific details and special considerations, including the District's annual work plan, which are acceptable to the District and the Bureau will be attached to and made a part of this agreement.	information, (b) providing technical assistance, and (c) supplying equipment and materials to the Bureau for use on Bureau administered public lands. 5. To meet with local officials of the Bureau periodically to review cooperation opportunities for conservation planning and application, and on problems of mutual concern. 6. To inform the Bureau of any known activity contemplated by the District or other agencies that might affect lands under the jurisdiction of the Bureau. 7. To cooperate with the Bureau in coordinating Bureau conservation plans and programs being developed by private individuals, State, or local governmental units or other Federal agencies on other lands within the District, including assistance in securing cooperative agreements with landowners and operators. 8. This agreement shall be effective when signed by both

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FORMAL AND INFORMAL COOPERATIVE AGREEMENTS
BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Paradise Valley Soil Conservation District and Kings River Soil Conservation District	Soil (and water) Conservation District	All	5. This agreement shall not be construed to affect the jurisdiction of the Bureau over public lands administered by the Bureau within the boundaries of the District; nor will this agreement impose upon either party an obligation for expenditure of funds or the furnishing of materials or equipment, or other resources in excess of the amount authorized for such purposes. 6. To the maximum extent possible, the District and the Bureau will mutually support soil and water conservation.	parties and shall remain in force until terminated or modified by agreement of both parties or terminated by either party alone by giving sixty (60) days' written notice of termination to the other. 9. This agreement is subject to the provisions of Executive Order No. 11246 of September 24, 1965, as amended, relating to equal opportunity.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Nevada Fish and Game Commission	Memorandum of Understanding and Agreement, December 2, 1948	Water Developments	Grants the state permission to develop, install and maintain water developments for small game in furtherance of the state's game restoration program.	Notify BLM of the location and nature of each proposed unit 15 days prior to commencement of development or installation.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Nevada Department of Fish and Game	Memorandum of Understanding 12-30-70 Yearly Review Supplements 1-6	Wildlife	1. To make available to NDFG such facilities, equipment and assistance as can be utilized in wildlife work. 2. To give full consideration to wildlife in resource management. 3. To permit structures as needed to facilitate wildlife management. 4. To assist in the enforcement of wildlife laws. 5. To assist in wildlife population surveys. 6. To consult NDFG when changing water courses or making range improvements. 7. To provide NDFG advance notice of proposed classification of lands for disposal, withdrawal or exchange. 8. To cooperate with NDFG in the development or construction of wildlife habitat improvements or access to hunting and fishing areas. 9. To provide NDFG with reports and correspondence pertinent to wildlife management on public lands.	1. To make available to BLM such facilities, equipment and assistance as can be utilized in wildlife work. 2. To manage wildlife so that public land habitat will be maintained in a good state of productivity. 3. To advise BLM of plans to introduce or transplant new, rare or endangered wildlife on public lands. 4. To create no permanent wildlife preserves, refuges or sanctuaries on public lands without notifying BLM. 5. To erect no structures and perform no construction on public lands without the consent of BLM. 6. To enter into agreement relative to the disposition of grazing privileges attached to base properties which the NDFG intends to purchase prior to transfer of title of the property to NDFG. 7. To provide BLM with reports and correspondence pertinent to wildlife management on public lands.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Nevada State Museum	Memorandum of Understanding February 4, 1965	Antiquities	1. Furnish land status upon request. 2. Advise museum of planned projects and developments that would disturb land surfaces. 3. Advise museum of dispositions of lands. 4. Recommend priorities for investigation areas. 5. Act in an advisory capacity to the museum. 6. Include prospective sites in recreation inventory.	1. Furnish maps of areas known to have archeological values. 2. Notify BLM when antiquities permits are obtained. 3. Notify BLM of intensive exploration or excavation. 4. Report prospective archeological sites. 5. Promptly report on any tracts inventoried. 6. Furnish cost estimates for systematic investigations 7. Report results of excavations. 8. Assist in preparation of interpretive materials and displays.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Nevada State Highway Department	Memorandum of Understanding May 5, 1965	1. Safety and traffic control signs. 2. Location access and other matters.	1. Install signs at road and trail junctions and other points of interest. 2. Accompany engineer on reconnaissance study. 3. Provide comments on resource impacts. 4. Acknowledge receipt of notice of public hearing.	1. Install all necessary traffic control and warning signs and directional signs on state highways to towns and communities. 2. Notify BLM of any planned route location work. 3. Request comments regarding resource impacts. 4. Notify BLM of location and time of public hearings. 5. Give BLM a full description of route selected. 6. Advise BLM when route selected is approved.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS
BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Nevada State Highway Department	Cooperative Agreement February 25, 1969	Material sites	1. Determine if unauthorized dumping is occurring. 2. Review need for particular sites. 3. Will consider requests for new material sites. 4. Make technical exam of site and write stipulations.	1. Review need of particular sites. 2. Relinquish unneeded pits. 3. Abate unauthorized dumping.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

<table>
<tr><th>NAME OF AGENCY</th><th>TITLE OF AGREEMENT</th><th>RESOURCES</th><th>ROLE OF BLM</th><th>ROLE OF OTHER AGENCIES</th></tr>
<tr><td>State of Nevada Department of Highways</td><td>Joint Memorandum
August 14, 1972</td><td>Highways and roads</td><td>1. Hold annual meeting.
2. Define BLM organizational lines and coordinate work.</td><td>1. Define state highway organizational lines and coordinate work.</td></tr>
<tr><td></td><td></td><td></td><td colspan="2">Minimize duplication of work.</td></tr>
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FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Nevada Highway Department	Joint Memorandum February 15, 1978	Material Sites	1. Issue exploration permits. 2. Assign District serial numbers to permit applications. 3. Issue free use permits for material needed for highway construction and any special stipulations needed. 4. Issue material site grants. 5. Do environmental analysis.	1. Reconnaissance of new material sites. 2. County, planning and and zoning needs. 3. Bonding of contractors. 4. Submit mining plan.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS
BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Nevada Division of Forestry U. S. Forest Service	Nevada Interagency Air Operations Plan 4-30-70 yearly review	Fire	Same.	Coordinating aerial support and provide effective air support facilities.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
State of Nevada	Fire Control Cooperative Agreement 9-30-70 subject to yearly review	Fire	Suppression of fires on state lands and BLM lands.	Suppression of fires on BLM lands and state lands.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
State of Nevada Planning Coordinator	Memorandum of Understanding July 16, 1973	Planning All	Consult with the state clearinghouse to assure that Bureau plans, programs and projects are consistent or compatible with local, regional and state development plans.	Coordinate the process of review and consultation with state and local officials and planning agencies. Notify the Bureau of state or other plans and programs which might impact lands administered by the Bureau.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Nevada State Department of Agriculture	Disposition of wild horses and burros gathered from public ranges within the State of Nevada March 24, 1978	Wild Horses and Burros	Responsible for identification, management and protection of "wild free-roaming horses and burros" as defined in 16 U.S.C. 1331, et seq.	Responsible for determining diseased animals and ownership of domesticated animals under state law pursuant to Title 50 of the Nevada Revised Statutes and State Regulation #58.

FORMAL AND INFORMAL COOPERATIVE AGREEMENTS BETWEEN THE BLM AND FEDERAL, STATE AND LOCAL AGENCIES

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCIES
Humboldt County N-020-2	Cattle Guard Agreement 8-3-77 signed		BLM's Responsibility (a) The BLM will furnish the cattleguard grill, end wings, and precut treated timber bases. The 8 foot by 24 foot, H-20 load class, with cleanout, will be considered standard unless it is mutually agreed traffic and road widths require more or less. (b) The BLM will load out materials listed in (a) above onto Humboldt County vehicles, at the BLM Wareyard, Winnemucca. (c) The BLM will furnish replacement materials, as mutually determined, for necessary maintenance.	Humboldt County's Responsibility (a) Furnish transportation, equipment and labor necessary to install the cattleguards. (b) Perform normal cattleguard maintenance, cleanout, and replace damaged or worn-out material when furnished by BLM.

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BUREAU OF LA[illegible]NAGEMENT

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REGISTER OF CURRENT COOPERATIVE AGREEMENTS

NUMBER	SUBJECT/ FUNCTION	TITLE	EFFECTIVE DATE	TERMINATION DATE	AGENCIES INVOLVED
		Agreement for Administration of Resources between the Winnemucca and Carson City Districts	9-3-76		BLM - Winnemucca and Carson City
		Agreement for Administration of Resources between the Winnemucca and Battle Mountain Districts	8-16-76		BLM - Winnemucca and Battle Mountain
		Agreement for Administration of Grazing Privileges between Winnemucca and Elko Districts	8-30-67		BLM - Winnemucca and Elko
		Agreement for Administration of Grazing Privileges between the Burns and Winnemucca Districts concerning the Licensing of Bengoa Ranching Company	2-5-65		BLM - Winnemucca and Burn
		Agreement for Administration of Grazing Privileges between Burns and Winnemucca Districts	11-25-69		BLM - Winnemucca and Burns
		Agreement for the Administration of Grazing Privileges between Winnemucca and Vale Districts	4-30-68		BLM - Winnemucca and Vale
		Memo of Understanding between State Director Nevada and State Director California for Grazing Administration across the California/Nevada State Lines	2-28-64 11-6-68 1-25-72		BLM - California and Nevada
		Agreement for Administration of Grazing Privileges between the Susanville and Winnemucca Districts	3-27-67		BLM - Winnemucca and Susanville
		Fire Protection Agreement between Winnemucca and Battle Mountain Districts	5-1-64		BLM - Winnemucca and Battle Mountain
		Fire Protection Agreement between Winnemucca and Carson City Districts	4-1-65		BLM - Winnemucca and Carson City
		Fire Protection Agreement between Winnemucca and Susanville Districts	5-1-65		BLM - Winnemucca and Susanville

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NUMBER	SUBJECT/ FUNCTION	TITLE	EFFECTIVE DATE	TERMINATION DATE	AGENCIES INVOLVED
		Fire Protection Agreement between Winnemucca and Susanville Districts	5-1-73		BLM - Winnemucca and Susanville
		Fire Protection Agreement between Winnemucca and Elko Districts	5-1-62	-65-71	BLM - Winnemucca and Elko
		Letter Agreement for Enhancement of Lahontan Cutthroat Spawning-Mahogany Creek	8-30-73		BLM - Fish & Wildlife Service
		Cooperative Fire Fighting Agreement	8-10-40	3-31-41	USDI Grazing Service and Fish & Wildlife Service
		Soil Conservation Agreement between Vya Soil Cons. Dist. Bureau of Sport Fisheries and BLM	6-14-60		Vya SCS - Bureau of Sport Fisheries and BLM
		Memorandum of Understanding between the Fish & Wildlife Service and the Bureau of Land Management	10-16-46		BLM - Fish & Wildlife Service
		Memorandum of Understanding between the USGS, USDI, and BLM on Charter for the USGS-BLM coal subcommittees of the USGS-BLM Coal Committee	11-1976		USGS - BLM
		Memo of Understanding between the BLM, USDI, and USGS, USDI for Outer Continental Shelf Oil and Gas Lease Sales	11-1976		USGS - BLM
		Memo of Understanding between BLM, USDI and USGS, USDI on Onshore Mineral Lease Operations	11-1976		USGS - BLM
		Memorandum of Understanding for the Geothermal Program	6-1976		USGS - BLM - U.S. Fish & Wildlife Service
		Cooperative Procedures for Coordinating Preparation of EAR's and EIS's	8-6-75		BLM and USGS

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NUMBER	SUBJECT/ FUNCTION	TITLE	EFFECTIVE DATE	TERMINATION DATE	AGENCIES INVOLVED
		Memorandum of Understanding on matters related to range management	2-1973		Humboldt National Forest and BLM - Winnemucca Dist.
		Rights-of-Way Agreements	8-1967		USDA - Forest Service & USDI - BLM
		Nevada Interagency Air Operations Plan	11-1967		USDI - BLM - Div. of Forestry, Dept. of Conservation and Natural Resour. State of Nevada and USDA - Forest Service
		Cooperative Fire Agreement	7-3-78		BLM - USDA - Forest Serv.
		Memo of Understanding on Grazing Management	3-1967		U.S. Forest Service - USDI - BLM - Winnemucca and Elko Districts
		Annual Operating Plan for Fire Protection	6-1963 4-1964 2-1965 &	1969	BLM - Winnemucca Dist. and U.S. Forest Service - Santa Rosa Division
		Cooperation with Paradise Valley Fire District	2-1959		USDA - Forest Service and Paradise Valley Fire District
		Forest and Range Fire Fighting	8-1947 2-1952 4-1953 11-1954		USDI - BLM - USDA - Forest Service
		Memo of Agreement - Snow Survey Operations	11-1971		USDA - Soil Conservation Service and USDI - BLM
		Soil Survey Work Plan	1971		USDA - Soil Conservation Service and USDI - BLM

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NUMBER	SUBJECT/ FUNCTION	TITLE	EFFECTIVE DATE	TERMINATION DATE	AGENCIES INVOLVED
		Allotment Management Planning	1971		BLM and Soil Conservation Service
		Memorandum of Understanding on Interagency Coordination in nonemergency critical habitat determinations pursuant to Section 7 of the Endangered Species Act of 1973	3-1976		BLM - BuRec and FWS
		Memorandum of agreement between the Bureau of Reclamation and the Bureau of Land Management	3-8-72		BuRec and BLM
		Memorandum of agreement between the Secretaries of the Army and the Interior relative to management of land and water resources at existing or proposed projects of the corps of engineers located within or partly within areas of lands under the jurisdiction of the BLM	2-1973		USDI - BLM - Secretaries of the Army
		Outdoor Area Lighting Service	8-7-69		California - Pacific U. and BLM - Winnemucca Dist.
		Water Rights and permits required prior to furnishing technical assistance in the installation of water management facilities	6-1962		Ag. Ext. Service, UNR State Dept. of Fish & Game State Soil Conser. Comm. USDA - Forest Service USDA - Soil Conser. Ser. USDI - BLM
		Cooperative Agreement for the Use of Water from Leonard Lake	2-19-74		BLM - Winnemucca Dist. Pine Forest Land and Livestock
		Memo of Understanding between BLM - USDI and USDA - Soil Conservation Service	1-1978		USDI - BLM - USDA - SCS

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NUMBER	SUBJECT/ FUNCTION	TITLE	EFFECTIVE DATE	TERMINATION DATE	AGENCIES INVOLVED
		Fire Operating Plan Agreement	2-26-79		BLM-N-020 - Vale Dist.
		Soil Survey Relating to ESs	10-1-78 9-30-79		USDI, BLM - USDA - SCS
		Buttermilk Cattle Allotment Management and Development Plan	4-11-79		BLM - Humboldt National Forest Service
		Erect, Install and Maintain Sign to Onion Reservoir	6-13-78		N2 - Alder Creek Ranch

DSC-1780-1 (MAY 1977)

CRITICAL ENVIRONMENTAL AREA ANALYSIS

The Blue Lake area and a small section of the Black Rock Desert through which the Applegate-Lassen Emigrant Trail runs are the main areas in the planning area which have evoked considerable interest from groups and agencies outside the Bureau of Land Management. Other areas which have been identified by BLM personnel and which might otherwise fit the Critical Environmental Area Analysis criteria have been addressed by the various resource specialists as Areas of Critical Environmental Concern.

The Blue Lake area is a parcel of public land located in the northwest corner of the Denio Planning Unit. It consists of glaciated lakes and mountain country and is one of the very few examples of Pleistocene glaciation in northwest Nevada. Its archeologic, botanic, geologic, recreational, and scenic values are second to none in the resource area. It is one of the most highly significant recreational areas in the state. The area has been segregated from mineral location and should be offered maximum protection.

There has been a great deal of public interest in the Blue Lakes area. The Sierra Club recommended Blue Lake be turned over to the State Parks System in 1961. In 1969, the Nevada Wildlife Federation passed a resolution calling for a primitive area around Blue Lake. Nevada Outdoor Recreation Association also recommended a wilderness designation for this area. In 1977, the Bureau of Land Management closed to off-road vehicle use approximately 16,000 acres of this area. The closure was made in order to protect the natural values of the area until a wilderness review could be completed (Pine Forest Vehicle Closure Plan). The Humboldt County Commissioners have filed suit against the BLM because of this closure. They would like the area to be reopened and made into a county park.

The Applegate-Lassen Trail was an emigrant trail used by westward-bound travelers during the mid-1800s. It received its heaviest use during the 1849 gold rush. In 1852 a portion of the Applegate-Lassen Trail became a part of the Nobles Wagon Route to Honey Lake Valley, California. A small portion of the Applegate-Lassen/1852 Nobles Route passes through the southwest corner of the Denio Planning Area at Chlona Crossing, west of Sulphur. The Applegate-Lassen Trail has been placed on the National Register of Historic Places. This designation includes a one-mile wide trail corridor. This portion of the trail is also within the boundaries of a National Monument Proposal for the Black Rock Desert which is presently under preliminary study by the National Park Service.

Blue Lake, the Black Rock Desert, as well as the "Humboldt River Bottoms" are listed as "Potential Natural Landmarks" by the Heritage Conservation and Recreation Service (BLM Instruction Memorandum No. NV-79-308, July 11, 1979).

PROBLEMS AND ISSUES

ECONOMIC

The following is a summary of problems and issues involving the managmeent of the public lands in the Paradise-Denio Planning Area and the local economy.

Lands

1. Release of public land for agricultural development

   Development of additional agricultural land through the disposal of public land would add to the economy of Humboldt County. Additional development could also reduce or offset the negative economic impacts of any adjustment in grazing privileges by providing an attractive alternative means of livelihood to ranchers with currently marginal operations who may no longer be able to support their ranches but would have no desire to leave the local area.

   Currently development of additional agricultural land is restricted by the necessity of completing studies to determine the safe yield of hydrographic basins within the county.

2. Need for management location and limitation of utility corridors
   Utility corridors are currently spread throughout the county in an unordered pattern. Consolidation into centralized corridors would ease access, maintenance and administration problems resulting in reduced operation costs.

Minerals

1. Impacts of growth in mining activity

   The opening of mines close to some of the small communities in the resource areas can pressure the capacity of limited community services (i.e., schools, water, waste disposal, etc.) The temporary nature of many mining activities can leave a community overextended in terms of the services it can support after the mineral activity has ended.

2. Impact of mineral withdrawals

   The amount of area to be withdrawn from mineral entry through wilderness exclosures is unknown at the present. The potential for economic impacts exists if mineralized areas are closed to prospecting and mining, generally in terms of future economic growth of this sector.

Forest Products

1. Forest products currently have virtually no economic impact on the county. However, as fuel and cordwood prices increase, the demand by individuals to cut their own wood for heating purposes may become economically important on an individual scale.

Range

1. Insufficient forage for the competing demands of wildlife, wild horses and burros, livestock and watershed protection

   If current trends continue, economic impacts will be felt in the agricultural, wildlife and recreation sectors. Insufficient forage means livestock, wildllife, and wild horse and burro numbers will be reduced reulting in income losses to the agricultural sector, and the trade and service sectors which cater to hunters and other nonconsumptive wildlife users. Insufficient forage also causes overgrazing which reduces the vegetative cover and results in accelerated erosion. Accelerated erosion reduces aquatic habitat quality causing fish populations to decline and further impacting the trade and service sectors which also cater to the anglers.

   If the insufficient forage problem is alleviated it will probably occur through reduction in livestock. Ranch income will therefore still be negatively impacted but if range conditions improve as anticipated, wildlife and fisheries habitat should improve allowing populations to increase and benefiting the trade and service sector through increased hunting and fishing.

2. Cost of federal AUMs does not reflect fair market value

   The BLM was instructed by the Bureau of the Budget in 1954 to charge full market value for products, including forage, derived from federal lands. Low grazing fees for the past forty years are responsible for the grazing permit itself assuming a market value. Because grazing permits are associated with the base property of ranches with cattle grazing federal land, the result has been that the market price of the ranch or its capitalized value which enables the rancher to borrow money includes the market value of the associated federal AUMs. At present the Bureau of the Budget's directive has been restrained by political delays but should these restraints be released and the price of federal AUMs align more closely with private AUMs and the value of ranches will decline and the ability of ranchers to borrow capital will be diminished. The overall impact of increasing grazing fees to reflect fair market value will be a decrease in ranch income.

3. Wild horses and burros are competing for public land forage

This problem was addressed in #1 but is summarized here: excessive numbers of wild horse and burros are competing with wildlife and livestock for limited forage resources. The overgrazing resulting from this competition damages watershed and wildlife resources as well as the range resource. Any reduction in wildlife, fishery or livestock numbers will reduce income to the county. Wild horses and burros have little economic value themselves, their major value is a cultural and historic one. Management of wild horses and burros was greatly restricted by PL 92-195. The current roundup process resulting from this law is expensive and has not kept pace with the annual recruitment rate.

Watershed

1. Federal control of water on public lands

The current practice of filing for water on public lands by the BLM is designed to enable the BLM to manage the public lands for the purposes mandated to it by various acts of the federal government. The economic impact of this process is difficult to determine. If the water was privately controlled, state law requires that it be put to beneficial use, and except for domestic purposes, this would imply that at least some economic benefits are being derived from private diversions. BLM water rights applications in contrast are generally for the purpose of maintaining fish and wildlife populations [1], ensuring that sufficient water is available for livestock grazed on public land and for other uses of public lands that require water. Definite economic benefits result from the purposes for which the BLM is reserving water. These purposes are generally not those for which private appropriators would reserve water and it is unclear whether the benefits from private appropriation would exceed the decrease in benefits from BLM filings if the water on public land were entirely under private control.

2. Reduction in vegetation cover resulting from overgrazing

The impact of reduced vegetative cover on fisheries habitat has been discussed in range #1. Reduced vegetative cover also results in more frequent and severe flooding, the economic impacts of which are self-evident. Less obvious is the impact on the sand dunes along Highway 95. Reduced vegetative cover has resulted in the blockage of the highway by windblown sand which involves costly removal operations.

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[1] The federal government is also subject to the rule of beneficial use and it is not yet clear whether water used for the purpose of maintaining fish and wildlife populations constitutes beneficial use.

Wilderness

1. Wilderness designation prevents mineral and reduces recreational access

   The designation of an area as wilderness will halt further prospecting and potential mining activity. This condition may reduce future economic growth of the region's mining sector if potentially valuable mineral resources lie within the wilderness area.

   Wilderness designation has generally not resulted in reduced visitor usage, however the type of use has changed. At Blue Lakes, for example, vehicle closure resulted in a change from overnight camping to day-use. Wilderness designation makes livestock and trapline management more difficult, and eliminates ORV use, but the overall economic impact, except where mining potential exists, is probably not significant.

Wildlife

Discussed in Range #1

Other

1. Lack of education, knowlege and general indifference to federal regulations

   Various forms of trespass, an outgrowth of this problem, boost administration costs due to the necessity for use supervision, case processing and trespass actions.

2. Access to public lands

   Restriction of access to public lands in areas that do not have wilderness characteristics may have a negative economic impact. Ranchers, miners, trappers, hunters, fishermen, ORV users, and other recreation users are dependent on access to public lands for a large percentage of their activities. Restrictions on access, particularly vehicle closure, will probably reduce many of these activities resulting in reduced county income.

3. Conflicts between cultural values and resource use and development

   The protection of cultural resources and mitigation of impacts is often costly. If resource development is restricted by the need to protect cultural resources, the economic impact can be significant. As an example, the need to protect cultural resources in the Black Rock Desert may add significantly to the cost of developing geothermal resources in the area.

SOCIAL

The following is a summary of those problems and issues which have been identified in this document as being the major concerns of the local populace in regard to the management of the public lands in the Paradise-Denio Resource Area.

Lands

1. Lands involved in potato growing utilize a large number of Mexican Nationals in their labor force. These create a number of social problems for Winnemucca. Any increase in public lands utilized by the potato industry would in turn magnify the existing social problems.
2. Because of checkerboard land ownership patterns, administration of wild horses is made more difficult and frequent trespasses on private land occur as well as cattle trespasses on public land.

Minerals

1. The public is concerned about scarring of the landscape caused by mining activities.
2. The mining activity feels that environmental protection threatens to put their operations and the national economy in jeopardy by limiting the areas open to mining and making mining economically unfeasible.
3. Geothermal development in the Denio area was viewed as potentially ruining the qualities of isolation and ruralness which area residents find attractive.
4. Abandoned mining shafts create hazards for the public.

Forest Products

1. There is a demand for more supplies closer to town.

Range

1. Reduction in grazing rights would be devastating to many individual ranchers with small operations.
   a. Ranchers and nonranching residents place a high value on the lifestyle and culture associated with ranching and consider it to be an essential ingredient of the rural atmosphere of the area. It is because of this rural atmosphere that many residents choose to live in this area.

b. Though ranching is of minimal economic importance to the county as a whole, it is vitally important to some of the small communities.

2. Ranchers feel that everchanging BLM policies make it difficult for them to plans for the future.

3. Ranchers feel that not enough positive actions to improve the range have been taken by the BLM in recent times.

Wild Horses

1. Wild horse protection societies place a high social value on feral horses and support minimal control of wild horse populations. They also oppose wild horse sanctuaries on the basis of their belief that the horses would be relegated to the least desirable portions of the planning area.

2. A majority of the American public supports the views of the wild horse protection societies. This is probably due largely to emotional publicity of the issue, a romanticized perception of the free roaming horse, and a lack of public education concerning the serious problems the Wild Horse and Burro Protection Act has created.

3. The ranching community is valued highly socially, culturally, and economically by local residents. Wild horse protection policies are viewed as a threat to the continuing existence of the rancher.

4. Wild horse groups feel that there are not enough range riders and that more consideration should be given to the foaling season when roundups are planned.

Water Resources

1. Local residents are opposed to the BLM's water right acquisition program as they consider it a threat to the continued existence of the present uses of the public lands.

2. Most area residents would prefer that a local regulatory body be responsible for implementation of any pollution control measures.

3. Erosion results in silting of streams and reservoirs which has detrimental effects on the fishing potential of these. Also wind movement of the sands in the dune area north of Winnemucca periodically causes obstruction of traffic on Highway 8A and results in costly removal operations.

Wildlife

1. Ranchers are opposed to total removal of cattle from areas for the benefit of the wildlife habitat. They feel that cattle should be used as a management tool and that range improvements will generally improve the wildlife habitat as well. Although cattle can be used as a management tool in specific situations and range improvements can improve the wildlife habitat, careful control of these measures is required as detrimental effects have occurred to the wildlife habitat as a result of utilization of these methods in the past.

Recreation

1. Hunters, fishermen, off-road vehicle enthusiasts, and rock collectors want no areas closed to these activities nor vehicular access limited to areas used for these purposes.

2. Hunters, fishermen, and recreationists as well as the county commissioners have voiced their opposition to the closure of the Blue Lakes Area. However, environmental groups and a majority of the campers using the area support the closure and find it to be beneficial to the area. The county commissioners favor county control of Blue Lakes Recreation Area. However, inverviews with area residents indicate a lack of confidence in the county's ability to manage the area.

Cultural Resources

1. Collection of artifacts from archeological sites seriously impacts the data potential of these sites. However, many area residents consider arrowhead collecting to be a legitimate use of the public lands and value it as a recreational activity. Part of the problem appears to be that the public does not fully understand the significance of prehistoric artifacts. (More public education efforts might lessen the present high rate of archeological site vandalism.)

2. Many area residents are interested in historic and prehistoric information gleaned from BLM studies. However, extreme care is required in releasing such information, as publication of cultural resource site locations could lead to the destruction of these sites.

Wilderness

1. Environmental groups from outside the county favor proposed wilderness areas in the planning area.

2. Local residents are generally opposed to wilderness areas on the basis that access to these areas will be cut off for recreation, mining, trapping, hunting, fishing, and ranching purposes. They favor multiple use over locking up areas in wilderness designations.

3. A fear prevails among the local populace that the wilderness studies are the first step in a plan formulated by the BLM to eventually lock up all the public lands.

General

1. The feeling prevails among area residents that the BLM is not responsible enough to the local public. More authority at a local and regional level is suggested as a solution.

2. Local residents feel that more attention is given to environmental effects than to social and economic factors when land use decisions are made.

3. In the opinion of some residents of the planning area, more time is spent doing studies and planning than taking positive action to improve the condition of the public lands.

4. There is a lack of understanding among the local public as to what the BLM actually is doing and why. There is a need for more feedback to the public from BLM studies.

5. The short-term residence of most BLM employees causes them to appear to area residents as lacking commitment to the community and its goals and lacking sufficient familiarity with the area to make sound land use decisions.

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